Aer-21/70

19 NOV 1958

SPECIAL HANDLING REQUIRED IN ACCORDANCE
WITH PARAGRAPH 65, OPNAVINST 3750.6C

FOURTH ENDORSEMENT on VF-121 AAR ser 6-58 concerning TV-2 BUNO 136834 accident occurring 22 September 1958, pilot (b) (6)

From: Chief, Bureau of Aeronautics
To: Chief of Naval Operations
Via: Commander, U. S. Naval Aviation Safety Center

Subj: VF-121 AAR ser 6-58

1. Forwarded, comments withheld pending receipt of results of fuel contamination investigation.

(b) (6)

By direction

FF4-1/A25
Serial:
80/ 12725
13 NOV 1958

SPECIAL HANDLING REQUIRED IN ACCORDANCE
WITH PARAGRAPH 65, OPNAVINST 3750.6C

THIRD ENDORSEMENT on VF-121 AAR ser 6-58 concerning TV-2 BUNO 136834 accident occurring 22 September 1958, pilot (b) (6)

From: Commander Naval Air Force, Pacific Fleet
To: Chief of Naval Operations (OP-57)
Via: (1) Chief, Bureau of Aeronautics (MA-61)
(2) Commander, U. S. Naval Aviation Safety Center

Subj: VF-121 AAR ser 6-58

Ref: (a) OPNAVINST 3750.6C

1. Forwarded, concurring in the conclusions and recommendations of the Aircraft Accident Board, and in the remarks contained in subsequent endorsements.

2. It was noted that the first endorsement contained no statement as to whether or not a separate legal investigation was to be conducted as required by paragraph 46.b.3. of reference (a).

(b) (6)

By direction

Copy to:
BUORD (MA-5)
NAVAVSAFCEN (2) (Airmail)
CINCPACFLT
DIRFAIRSANDIEGO
OIC, NPU, EL CENTRO
COMCARAIRGRU-12
CO, VF-121
BAR, BURBANK
BAR, COLUMBUS

SPECIAL HANDLING REQUIRED IN ACCORDANCE WITH PARA 65, OPNAV INSTRUCTION 3750.6C

FF12/COMCVG-12
A25
Ser: 71/ 500

27 OCT 1958

SECOND ENDORSEMENT on VF-121 AAR Serial 6-58 concerning TV-2, BuNo 136834, accident occuring 22 September 1958, Pilot (b) (6)

From: Commander, Carrier Air Group TWELVE
To: Chief of Naval Operations
Via: (1) Commander Naval Air Force, U. S. Pacific Fleet
(2) Chief, Bureau of Aeronautics
(3) Commander, U. S. Naval Aviation Safety Center

Subj: VF-121 AAR 6-58

1. Forwarded, concurring with the comments and recommendations of the accident board and the comments of the FIRST ENDORSEMENT.

2. In view of the evidence which strongly indicates fuel control malfunction, plus the fact that the in-flight difficulties were experienced immediately after changing fuel tanks, there is a possibility that fuel contamination was a causal factor in this accident.

3. By copy of this endorsement the Commanding Officer, Fighter Squadron ONE HUNDRED TWENTY-ONE is directed to review this accident with the purpose of exploring the possibility that fuel contamination was a possible cause factor.

R. H. Dale

R. H. DALE

Copy to:
CINCPACFLT, Direct
BUAER, Direct
NAVAVSAFCEN (2) Airmail Direct
BAR BURBANK
BAR COLUMBUS (Direct) for ALLISON INDIANAPOLIS
NFO El Centro, California
BUORD (Ma-5)
NAVY FLT SAF Liaison Officer, Directorate of FltSaf Research, Norton AFB, Direct
CO, VF-121

03

FIGHTER SQUADRON ONE TWENTY ONE
U.S. NAVAL AIR STATION
MIRAMAR 45, CALIFORNIA

VF121/RJR:rh
A25
Serial 903
10 October 1958

ORIGINAL

FIRST ENDORSEMENT on VF-121 AAR Serial 6-58 concerning TV-2, BuNo. 136834 accident occurring 22 September 1958, Pilot (b) (6)

From: Commanding Officer
To: Chief of Naval Operations
Via: (1) Commander Carrier Air Group TWELVE
(2) Commander Naval Air Force, U.S. Pacific Fleet
(3) Chief, Bureau of Aeronautics
(4) Director, U.S. Naval Aviation Safety Center

Subj: VF-121 AAR 6-58

1. Forwarded, concurring with all the comments and recommendations of the accident board.

2. Although in this case an airstart would probably have been a mistake, it is recommended that in addition to check lists, all pilots commit to memory airstart procedures so that under conditions of darkness (with no electrical power) or under circumstances where time is at a premium, an airstart can be executed if deemed advisable. LTJG (b) (6) as all other pilots of this command, was required to know these procedures and had in the past demonstrated his familiarity with them, but apparently under the stress of the emergency preferred to rely on the check-list. Considering his altitude and other circumstances, this decision cannot be criticized.

3. All TV aircraft assigned have been inspected for canopy cable connections, and the linkages to the initiator were found to be adjusted properly. The Air Start Plates have been inspected and found to be installed properly and are legible.

4. Enclosure (1) of the medical officers report (tab E) states LTJG (b) (6) had considerable trouble removing his harness since his parachute had standard releases. The new parachutes have the "quick-release" installed on the harness, and are being received as replacements on surveyed parachutes.

5. COMNAVAIRPAC Report Symbol 3750-1 will not be submitted.

R. J. ROSEN

Copy to:
CAG-12
COMNAVAIRPAC, Direct
CINCPACFLT, Direct
BUAER, Direct
NAVAVNSAFCEN (2) Airmail Direct
BAR BURBANK
BAR COLUMBUS (Direct) For ALLISON INDIANAPOLIS
NPU El Centro, Calif.
BUORD (Ma-5)
NAVY FLT SAF Liaison Officer, Directorate of FltSaf Research, Norton AFB, Direct

01

ORIGINAL

FIGHTER SQUADRON ONE TWENTY ONE
U.S. NAVAL AIR STATION
MIRAMAR 45, CALIFORNIA

VF121:JDR
A25
Ser: 1111
DEC 3 1958

From: Commanding Officer, Fighter Squadron One Hundred Twenty One
To: Commander, Carrier Air Group TWELVE

Subj: VF 121 AAR 6-58.

Ref: (a) Second Endorsement on VF 121 AAR 6-58 dated 27 October 1958 by Commander, Carrier Air Group TWELVE

1. Reference (a) directed VF 121 to investigate the possibility of fuel contamination as a cause factor in the subject accident.

2. The Aircraft Accident Board conducted further investigation and disclosed the following information:

a. Inspection of fuel, fuel tanks or any component part of the fuel system for fuel contamination was not possible due to severity of impact damage.

b. The fuel used by VF 121, Detachment ALFA jet aircraft is JP-4 and is stored at the fuel farm at NAS, North Island. The fuel is trucked to the aircraft by Maytag Aircraft Corporation refuelers. Mr. (b) (6) fuel supervisor at North Island and Naval Air Depot, states that the fuel is stored, tested and trucked in accordance with the instructions contained in BuAer Technical Order 2-57. Mr. (b) (6) also states that for the last year the daily, weekly and monthly tests performed by fuel personnel produced no evidence of fuel contamination.

c. The fuel is filtered as it is delivered to the refuelers and again as it is pumped into the aircraft.

d. The preflight inspection of the TV-2 aircraft requires all fuel drains to be bled to determine evidence of water or other contamination. This was done on subject aircraft on the morning of the accident. The results were negative.

e. Other squadron aircraft, which were fueled by the same equipment which fueled subject aircraft, experienced no engine abnormalities either before, during or after the date of the accident.

f. Interrogation of the Allison Field Service Representative (Mr. (b) (6) revealed that water contamination in fuel results in fluctuation of engine RPM and engine rumbling and/or possible flame out of the engine. Mr. (b) (6) made the statement that he does not recall fuel contamination causing an increase in engine RPM nor could he conceive of water or foreign matter in JP-4 causing high engine RPM.

g. In the TV-2 the wing group fuel is transferred to the top of the fuselage tank, and not directly to the engine. LTJG (b) (6) stated that he transferred fuel into an almost full fuselage tank only a short period before the malfunction occurred. It appears unlikely that this procedure contributed to the malfunction.

3. The accident board is of the opinion that fuel contamination did not in any way contribute to the cause of the accident.

CERTIFIED TO BE A TRUE COPY
(b) (6)
Lt, USN

(b) (6)

ENCLOSURE (1)

05

AIRCRAFT ACCIDENT REPORT
OPNAV FORM 3750-1 (REV. 11-56)
PAGE 1

See instructions for completion prior to filling out

ORIGINAL

OPNAV REPORT 3750-1

PART I - GENERAL

1. AIRCRAFT ACCIDENT BOARD CONVENED BY: VF-121
2. DATE OF ACCIDENT: 22 Sept 1958 | TIME: 1125T | 3. AAR SERIAL NO.: 6-58
4. TO: CHIEF OF NAVAL OPERATIONS (Op-57)
5. ENCLOSURES: (1) SEE ATTACHED LIST (2) (PAGE 4) FOR ENCLOSURES (3) (4) (5) (6) (7) (8) (9)
6. VIA: (1) COMMANDER, CARRIER AIR GROUP 12
(2) COMMANDER NAVAL AIR FORCE, PACIFIC FLEET
(3) CHIEF, BUREAU OF AERONAUTICS
(4) DIRECTOR, U.S. NAVAL AVIATION SAFETY CENTER
(5)
(6)
(LAST) DIRECTOR, U. S. NAV. AV. SAFETY CENTER
7. REPORTING CUSTODIAN (if different than item number 1): VF-121 DET ALFA
8. ACTIVITY OPERATING AIRCRAFT (if different than item 7):
9. KIND OF FLT.: 1A2
10. TIME OF DAY: ☐ DAWN ☒ DAY ☐ DUSK ☐ NIGHT
11. LOCATION OF ACCIDENT: 33 miles, 262° M. from NAAS El Centro
12. ELEV. ABOVE SEA LEVEL: 2800 feet
13. PLACE OF LAST TAKEOFF: NAS North Island
14. CLEARED FROM NAS North Island TO NAS North Island
15. TYPE CLEARANCE: ☐ IFR ☐ VFR ☒ LOCAL ☒ OPERATIONAL ☐ AIRWAYS ☐ DIRECT ☐ OTHER (Specify)
16. TIME IN FLT.: 1-35
17. TYPE ACCIDENT: 0 6 (Abandoned Aircraft)
18. PHASE OF FLIGHT: 4 (In-Flight)
19. MODEL: TV-2
20. SERIAL NO.: 136834
21. DAMAGE TO AIRCRAFT: ☒ A. ☐ B. ☐ C. ☐ D.
22. DOL. COST: $148,000
23. AIRSPEED (Kts): Estimated 200 Kts IAS
24. A/C WT.: 11,747 lbs
25. LIST MODEL, SER. NOS., REPORTING CUSTODIAN AND DAMAGE CLASSIFICATION OF ANY OTHER A/C INVOLVED (submit separate OPNAV Form 3750-1 for each A/C): NONE

SECTION B - PERSONNEL INFORMATION

1. PERSONNEL	2. NAME (last, first and middle initial)	3. RANK	4. FILE OR SERIAL NO.	5. DESIG.	6. DATE OF RATING	7. DATE OF BIRTH	
PILOT (OR PERSON ... AT CONTROLS)	(b) (6) [redacted]	LTJG	(b) (6) [redacted]	1310	4 APR 55	11 MAR 33	[illegible]
CO-PILOT		LT		1310	23 AUG 50	23 AUG 29	29

8. PERSONNEL	9. OPERATIONAL FLT. TRAINER AVAILABLE	USED	10. UNIT TO WHICH ATTACHED	11. TYPE INSTRUMENT CARD
PILOT	☐ YES ☒ NO	☐ YES ☒ NO	VF-121 DET ALFA	☒ STANDARD ☐ SPECIAL
CO-PILOT	☐ YES ☒ NO	☐ YES ☒ NO	COMNAVAIRPAC	☒ STANDARD ☐ SPECIAL

12. PILOT/CO-PILOT/STUDENT EXP.

ITEM (TOTAL PILOT HOURS)	PILOT	CO-PILOT	STUDENT	ITEM	PILOT	CO-PILOT	STUDENT
ALL MODELS	1578		1790	CV LANDINGS DAY/NIGHT	114/52	06	12/0
ALL MODELS IN LAST 12 MOS.	408		95	FCLP LANDINGS DAY/NIGHT	302/115		79/0
ALL MODELS IN LAST 3 MOS.	117		25	INSTRUMENT HOURS, LAST 3 MONTHS	6.8		8.2
ALL SERIES THIS MODEL	183		19	NIGHT HOURS, LAST 3 MOS.	6.1		0
ALL SERIES THIS MODEL, LAST 12 MONTHS	183		19	(jet accidents only) TOTAL JET PILOT HOURS	192		260
ALL SERIES THIS MODEL, LAST 3 MONTHS	73		11	DATE LAST FLIGHT, ALL SERIES THIS MODEL	9-19-58		9-19-5[illegible]
				DURATION LAST FLIGHT, ALL SERIES THIS MODEL	2.1		2.[illegible]

13. ALL PERSONS ABOARD

	NAME (last, first and middle initial)	RANK/RATE	FILE OR SERVICE NO.	ORG. TO WHICH ATTACHED	DUTY STATUS	BILLET	INJURY
a.	(b) (6) [redacted]	LTJG	(b) (6) [redacted]	VF-121 DET ALFA	ECHO	PILOT	B/[illegible]
b.		LT		CNAP	ECHO	STU-DENT	B/3
c.							
d.							
e.							

(If additional space is necessary, attach additional sheet(s))

OPNAV FORM 3750-1 (REV. 11-55)

PAGE 2

AIRCRAFT ACCIDENT REPORT

OPNAV REPORT 3750-1

1. CEILING	2. VISIBILITY	3. WIND DIRECTION AND VELOCITY	4. TEMPERATURE OUTSIDE AIR	RUNWAY	5. DEW POINT	6. ALTIMETER SETTINGS
CLEAR	20	NOT APPLICABLE	NA	NA	NA	NA

7. OTHER WEATHER CONDITIONS *(winds aloft, icing levels, state of sea, etc., if pertinent to accident)*

NOT APPLICABLE

C. FACTORS CONTRIBUTING TO ACCIDENT

ITEM	X	Σ	ITEM	X	Σ	ITEM	X	Σ
PILOT ~~ERROR~~ FACTOR			LANDING SIGNAL OFFICER ~~ERROR~~ FACTOR			MATERIAL FAILURE OR MALFUNCTION	X	
CREW ~~ERROR~~ FACTOR			OTHER PERSONNEL ERROR, Specify			~~MAINTENANCE~~ DESIGN		
SUPERVISORY PERSONNEL ~~ERROR~~ FACTOR			ADMINISTRATIVE ~~ERROR~~ FACTOR			ROLLING AND PITCHING DECK/ROUGH SEAS		
MAINTENANCE PERSONNEL ~~ERROR~~ FACTOR			AIRPORT OR CARRIER FACILITIES			UNDETERMINED	X	
SERVICING PERSONNEL ~~ERROR~~ FACTOR			WEATHER			OTHER, Specify		

FOR ACCIDENTS ABOARD DEPLOYED CARRIERS *(Complete following Section on Pilot)*

1. DATE DEPLOYED	2. DAY-HOURS/LANDINGS LOGGED SINCE DEPLOYED	3. DAY-HOURS/LANDINGS LOGGED LAST 30 DAYS
4. INSTRUMENT HRS. LOGGED SINCE DEPLOYMENT	**5. NIGHT-HOURS/LANDINGS LOGGED SINCE DEPLOYED**	**6. NIGHT-HOURS/LANDINGS LOGGED LAST 30 DAYS**

PART II – MAINTENANCE, MATERIAL AND FACILITIES DATA

1. AIRCRAFT HISTORY

DATE OF MANUFACTURE	SERVICE TOUR	MONTHS IN THIS TOUR	TOTAL NO. OF OVERHAULS	FLIGHT HRS. SINCE LAST OVERHAUL	FLIGHT HRS. SINCE ACCEPTANCE	TYPE CHECK LAST PERFORMED	FLIGHT HRS. SINCE LAST CHECK	NO. OF DAYS SINCE LAST CHECK
6 APR 54	2	16	1	678.4	1779.1	MAJOR	16.5	70

2. ENGINE HISTORY

	ENGINE MODEL	SERIAL NO. OF ENGINE						
NO. 1	6 DEC 51	J-33A20	A-079738	1	753.8	928.9	MAJOR	16.5	70
NO. 2								
NO. 3								
NO. 4								

3. GENERAL

a. DID FIRE OCCUR: ☐ BEFORE ACCIDENT ☒ AFTER ACCIDENT ☐ DID NOT OCCUR

b. DID EXPLOSION OCCUR IN FLIGHT? ☐ YES ☒ NO

c. CHECK IF APPLICABLE: ☒ AMP FUR SERIAL 477

d. HAS DIR BEEN REQUESTED? ☒ YES ☐ NO

e. FAILED COMPONENTS INVOLVED: SUSPECTED FUEL CONTROL FAILURE

SECTION A – AIRCRAFT AND ENGINE DATA

CHECK BELOW ITEMS PRESENT IN THIS ACCIDENT

4. MAJOR FACTORS

a. ☐ AIRCRAFT DESIGN
b. ☒ AIRCRAFT EQUIPMENT
c. ☐ MAINTENANCE
d. ☒ UNDETERMINED
e. ☐ TECHNICAL INSTRUCTION
f. ☐ OTHER, Specify
g. ☐ SURFACE FACILITIES
h. ☐ HUMAN ENGINEERING (e.g. cockpit configurations)

5. FLIGHT DATA

A. ALTITUDE AT MALFUNCTION	B. AIR SPEED (kts)	C. OPERATING TEMPERATURE	D. WEIGHT OF AIRCRAFT	E. C.G. (% MAC)	F. KIND OF FUEL	G. FUEL PRESSURE
20,000	220 Kts	1000° (MAX)	11,507	26.7%	JP-4	NORMAL

H. EVIDENCE OF FUEL CONTAMINATION: NONE

I. CAUSE OF ENGINE FAILURE OR FLAMEOUT: SUSPECTED FUEL CONTROL FAILURE

J. FUEL CONTROL REGULATOR/CARBURETOR *(List Stock and Ser. nos., give time since new or overhauled)*: FSN R2915-344-0046 NBPN SER 167444 (173 hrs.)

K. EXTERNAL STORES ABOARD A/C: NONE

(If additional space is necessary, attach additional sheet(s))

AIRCRAFT ACCIDENT REPORT

PART II – MAINTENANCE, MATERIAL AND FACILITIES DATA (Cont'd)

SECTION B – FACILITIES DATA

1. CONDUCT OF FACILITIES INVOLVED IN THE ACCIDENT (CHECK THOSE WHOSE EFFECT ON ACCIDENT IN THE ANALYSIS SECTION)

a. ☐ CLEARANCE AUTHORITY
b. ☐ FLIGHT PLANNING INFORMATION SOURCE
c. ☐ LANDING AIDS (GCA, CCA, ILS, etc.)
d. ☐ TRAFFIC CONTROL TOWER (Field or Ship)
e. ☐ APPROACH AND ENROUTE AIDS TO NAVIGATION
f. ☐ RUNWAY WATCH
g. ☐ LANDING SIGNAL OFFICER
h. ☐ RUNWAY
i. ☐ WATER LANDING AREA
j. ☐ APPROACH ZONE
k. ☐ END ZONE
l. ☐ SHOULDERS
m. ☐ TAXIWAY
n. ☐ PARKING AREA
o. ☐ EMERGENCY ARRESTING GEAR (Runway)
p. ☐ AIRCRAFT SERVICING, HANDLING & DIRECTING (Field or Ship)
q. ☐ CRASH AND RESCUE
r. ☒ SEARCH AND RESCUE
s. ☐ CATAPULT
t. ☐ ARRESTING GEAR (Carrier)
u. ☐ BARRIER OR BARRICADE (Field or Ship)
v. ☐ FLIGHT DECK
w. ☐ OTHER, Specify

2. SHIPS DATA

a. EQUIPMENT INVOLVED: ☐ CATAPULT ☐ ARRESTING GEAR	b. PRESSURE SETTINGS	c. WIND OVER DECK	d. RELATIVE HEADWIND	e. APPROACH SPEED (OPN-1A READING)

f. MARK NUMBER	g. MODEL NO.	h. LOCATION ON SHIP	i. LAUNCHING BRIDLE AND CONFIGURATION USED

j. CATAPULT/ARRESTING GEAR BULLETINS OR NOMOGRAMS USED

k. THIS PORTION SHALL BE COMPLETED WHENEVER (1) A MAJOR AIRCRAFT ACCIDENT INVOLVES ARRESTING GEAR, BARRIER AND/OR BARRICADE EQUIPMENT, OR (2) AN AIRCRAFT ACCIDENT INVOLVES MALFUNCTIONING OF ARRESTING GEAR, BARRIER AND/OR BARRICADE EQUIPMENT. MINOR ACCIDENTS OR ROUTINE DAMAGE TO CABLES, WELDINGS AND OTHER EXPENDABLE COMPONENTS NEED NOT BE REPORTED.

ENGAGED	DECK RUNOUT (FT.)	RAM TRAVEL (IN.)	CONTROL VALVE SETTINGS: CONSTANT PRESSURE DONE (P.S.I.)	RATIO	CONSTANT RUNOUT (WT. LBS.)	ACCUMULATOR PRESSURE (PSI)	COMMENTS (for cable failure specify number of landings and months in service)
DECK PENDANT							
DECK PENDANT							
BARRIER							
BARRIER							
BARRICADE							

PART III – REMARKS (continue on separate pages if necessary)

PART	SECTION	ITEM

A. NONE

B. NONE

C. AAR COPIES TO:

(1) NAVAVSAFCEN (2) (AIR MAIL) DIRECT
(2) BUAER DIRECT
(3) CINCPACFLT DIRECT
(4) BAR BURBANK DIRECT
(5) BAR COLUMBUS DIRECT (FOR ALLISON, INDIANAPOLIS)
(6) NAVY FLT SAF LIAISON OFFICER, DIRECTORATE OF FLT SAF RESEARCH, NORTON AFB DIRECT
(7) COMNAVAIRPAC DIRECT
(8) O-in-C NBU EL CENTRO, CAL.
(9) Bu ORD (MA-5)
(10) CVG-12

D. [redacted] and [redacted] had not received any OFT or CPT time in this aircraft. [redacted] had completed a ground and flight check out course on 6 May 1958.

PART IV – SIGNATURES (INDICATE DATE SUBMITTED TO C.O.) 8 OCT 1958

[redacted] USN
[redacted] LT, USN
FLIGHT TRAINING OFFICER (member) — UNIT BILLET

[redacted] LT, USNR
PERSONNEL OFFICER (member) — UNIT BILLET

[redacted] LT(MC), USNR
(flight surgeon member)

ENCLOSURES

1A. Pilot's statement — TAB A

1B. Dual Pilot's statement

1C. Plane Captain's statement

WITNESS STATEMENTS: — TAB B

2A. NAS Whidbey RATCC report

2B. SAR Pilot's statement

3A. DIR on fuel Control — TAB C

3B. Power Plant's Leading CPO statement

3C. Maintenance Officer's statement

4. Photographs (A through E) — TAB D

5. Medical report (orginal only) — TAB E

6. Aerological report — TAB F

09

PART V. THE ACCIDENT

At 0952 on 22 September 1958, TV-2 BuNo 136834 (Voice Call: Cherry Coke 185) departed on a VF-121 Detachment Alfa scheduled instrument training flight from NAS North Island, San Diego, California. The front cockpit was occupied by LTJG (b) (6) the pilot and instructor. The rear cockpit was occupied by LT (b) (6) the student.

For approximately one hour and fifteen minutes the flight proceeded according to plan and there was no malfunction noted regarding the operation of the aircraft.

The pilot had just given the student two unusual attitude situations (from which he recovered successfully) when the pilot heard a loud rumble from the engine. At this time the pilot noted the tailpipe temperature gauge against the stop at 1000° C+ and the RPM indicating approximately 105%. The pilot retarded the throttle and the RPM stabilized at 86% until the exhaust temperature readings were within the green range (275° - 715° C). The position of the aircraft at this time was approximately 30 miles west of NAS Miramar at 20,000 feet. Because NAS North Island, NAS Miramar and NAAS Brown Field were covered by an overcast, the pilot elected to proceed to NAAS El Centro, about 105 miles to the east.

Approximately eleven minutes after the pilot received the first indication of engine malfunction a second and third high-temperature, high-RPM, loud-rumble were experienced and the engine was shut down by the pilot.

The aircraft was glided to approximately 10,000 feet in an easterly direction at which time both pilots successfully ejected from the aircraft. Chute openings were normal and both pilots landed in desert terrain with only minor scratches. The aircraft crashed and burned near the peak of a 2,900' mountain, 33 nautical miles west of NAAS El Centro.

The pilots were reached thirty minutes after the ejection by a helicopter from NAAS El Centro.

10

PART VI. DAMAGE TO AIRCRAFT

The aircraft sustained Category I strike damage as a result of the accident.

On the first impact with the ground the left wing tip and tank tore away starting a fire which eventually consumed the entire aircraft. The next impact was approximately 150 feet, 240° from initial impact when the aircraft apparently exploded, with bits of the instrument panels, engine accessories, main landing gear bits and pieces strewn over a circle of 250 feet in diameter. The wreckage bounced another 150 feet before the remains of the tail and engine reached their final resting place. Bits and pieces of the nose section, AN/ARC-27, wing fuel filler caps, gun access doors, etc., were found approximately 500 feet from the point of initial impact.

The engine, although relatively intact, had the accessory section missing completely. Approximately half the combustion chambers were crushed or missing. The turbine nozzle area did not appear extensively damaged and there were no holes in the casing to indicate possible turbine blade failure.

Impact speed in excess of 200 knots is estimated. The angle of impact was approximately ten degrees nose down with the left wing low.

PART VII: THE INVESTIGATION

The following information was determined during the investigation:

1. LTJG (b) (6) was on a scheduled, authorized VF-121 DET "A" instrument training flight with his student, LT (b) (6)

2. LTJG (b) (6) was designated a Naval Aviator on 4 April 1955 and has a total of 1578 flight hours. His total flight time in the TV-2 is 183 hours, having flown 73 TV-2 hours in the last three months. LTJG (b) (6) has had no previous aircraft accidents.

3. LT (b) (6) has flown a total of 1790 flight hours. This was his third flight under instruction in the VF-121 DET "A" jet instrument syllabus. LT (b) (6) has a total of 260 jet hours.

4. LTJG (b) (6) was in the front cockpit as the instructor. LT (b) (6) occupied the rear seat as the student. The aircraft, TV-2, BuNo 136834, departed NAS North Island at approximately 0952 T on 22 September 1953. The flight was authorized by the daily squadron flight schedule to be conducted in the local operating area for a duration of two hours.

5. The North Island weather was 2200 feet overcast, visibility seven miles, temperature seventy degrees, dew point 59 degrees, wind South Southwest at six knots.

6. The pilot, (b) (6) took off with a Fleet Operational Clearance from North Island, which permitted him to climb through the overcast to an "on top" condition, which was done. After reporting to the NAS North Island Tower that he was on top of the overcast the pilot switched to the squadron's tactical frequency and reported takeoff time to the squadron duty officer.

7. For approximately one hour, the instructor had the student fly basic air work patterns and maneuvers at or near 20,000 feet MSL. The air work was performed in the general vicinity of San Diego. During this period neither the pilot nor the student noted any abnormalities concerning the operation of the aircraft with one exception: Twice when the throttle was advanced to full power, the RPM went to 100.5%. Each time, the pilot reduced the throttle so that the RPM indicated 100%.

8. At approximately 1110 T, and after the aircraft was airborne for about one hour and fifteen minutes, the pilots heard a loud rumble aft of their position in the cockpit. This caused the pilots to observe the tail pipe temperature gauge which indicated approximately 1000° C. The RPM indicated 105%. This occurred immediately after the student had been placed in an unusual attitude situation by the instructor and the recovery had been effected. The unusual attitude was not considered to be radical by the instructor, approximately 30 degrees nose-up in pitch and 35 degrees right-wing down.

9. The first reaction by the pilot upon hearing the loud rumble and noting the abnormal engine readings was to retard the throttle, and, upon so doing, the engine RPM dropped to 86%, and the tail pipe temperature dropped to normal. The throttle was in a position estimated by the pilot to be correct for an 86% power setting.

10. The pilot was on an easterly heading at this time and his TACAN indicated his position to be 30 miles west of NAS Miramar. He continued the easterly heading, held his altitude, and contacted the squadron duty officer on tactical frequency. The pilot informed the squadron duty officer of his difficulty and that he was proceeding to NAAS El Centro. The San Diego area was covered by an overcast at this time. The tops of the overcast were approximately 4,000'.

11. At approximately 1118 T, and at a position approximately 40 miles east of NAS Miramar, a loud rumble was again heard from the engine section accompanied by 103% RPM and 1000° C tail pipe temperature indications. The pilot reduced throttle to idle which caused the abnormal engine indications to cease momentarily. However, this lasted only a very few seconds before the engine raced once again to 103% and 1000° C tail pipe temperature. The pilot at this time pulled the throttle to off and flamed out the engine.

12. The pilot switched to guard frequency, transmitted a MAYDAY, and placed the IFF on emergency. NAS Miramar Radar Air Traffic Control Center intercepted the emergency and established communications with the distressed aircraft (enclosure 2A). RATCC was informed by the pilot of the flame out and that the pilots were "going over the side." The aircraft disappeared from the RATCC scope on a bearing of 074°, 47 miles.

13. The two pilots discussed the possibility of ejection from the aircraft between the first malfunction at 1110 and the second series of malfunctions at 1118. It was decided if another such malfunction occurred they would eject. A brief review of the ejection procedures over the inter-com by the two pilots was completed during this period.

14. When the pilot flamed out the engine the aircraft was at an altitude of approximately 14,000 feet. The pilot elected to glide the aircraft on a heading toward El Centro. While gliding, the pilot began the air start procedures because, in his opinion, the mountains below did not look suitable for a parachute landing. However, he gave up the idea of an airstart when he had trouble reading the metal placard showing airstart procedures and instructed his student to prepare for ejection. (b) (6) told the student that he (b) (6) would jettison the canopy and the student would eject first. At an altitude of approximately 10,000 feet the pilot pulled up the left arm rest of his ejection seat, followed by the right arm rest. This should have jettisoned the canopy, however, it did not. The student yelled to (b) (6) that he was going. (b) (6) waved his hands in an affirmative manner. The ejection was normal for the student, including the canopy jettisoning.

15. When (b) (6) saw the canopy jettison, he proceeded with a normal ejection.

16. Both pilots made contact with the ground in sandy terrain and had no difficulty freeing themselves from their parachutes.

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17. NAS Miramar RATCC alerted rescue centers. NAAS El Centro dispatched a helicopter to the scene and picked up the pilots approximately 30 minutes after the ejection.

18. The aircraft crashed and burned near the top of a 2,900' mountain.

19. Two members of the Aircraft Accident Board proceeded to NAAS El Centro within two hours after the accident and interviewed the two pilots. Shortly thereafter they proceeded to the crash scene by helicopter.

20. The photographs in enclosure (4) and the Part VI, Damage to Aircraft, illustrate the unsalvable condition of the aircraft.

21. Investigation of the aircraft revealed impact damage and intense burning of the area. Little information could be obtained.

22. The wreckage was examined minutely and the remnants carefully sifted for a clue to the accident. The accessory section of the engine had suffered such severe impact damage that little could be salvaged. A portion of the fuel control was recovered and was returned to O & R, NAS North Island. The results of the DIR do not reveal a clue to the cause of the accident, due to severe impact damage of the fuel control.

23. There was no significant pattern to the wreckage other than severe impact damage, followed by severe burning.

24. An examination of the daily and preflight form showed that the aircraft received a proper daily and preflight inspection prior to flight.

25. An examination of the major inspection form indicated the aircraft and engine completed a major inspection on 14 July 1958.

26. An examination of the aircraft log indicated the aircraft had been in a non-aging modification status (G-5) for a period of 42 days following the major inspection.

27. An extensive ground search located the canopy and rear seat. The front seat could not be found. The canopy and rear seat were damaged so extensively that an operational check of the equipment was not possible. The rear seat automatic lap belt had fired and the automatic parachute actuating cable was attached to the safety belt. An inspection of the parachute worn by the student revealed that the automatic barometric release had worked.

28. An investigation of previous Navy Aircraft Flight Records (yellow sheets) revealed:

(a) A/C downed on 9 Sept and 10 Sept 1958 for unusually hard breathing through the oxygen regulator. This was repaired by removal of restriction in oxygen line.

(b) 10 Sept 1958. Rear seat turn and bank indicator inoperative. Corrected by replacing the instrument.

(c) 11 Sept 1958. Rear seat unable to transmit on UHF. Corrected by replacing interphone control Box. Front seat tachometer read 101% with 735° C tail pipe temperature. Rear seat read 100% with 735° C. Corrected by recalibrating instrument and ground turnup. Turned up 690° C at 100%.

14

(d) 17 Sept 1958. Pilot remarked as information note: "Unusual pulsating vibration in engine last few minutes of flight. Engine instruments all ok. Check for turbine blades." A check was made of the turbine section and engine mounts. Turned up and checked ok on ground.

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PART VIII: THE ANALYSIS

In analyzing this accident no cause factors were uncovered that could have occurred prior to the time the pilot experienced high RPM/high temperature indications, with one exception: the pilot that flew the aircraft two flights before the flight in question noted a pulsating vibration in the engine toward the end of his flight. No abnormal instrument readings accompanied this vibration. The aircraft received an inspection of the turbine area by maintenance personnel in an attempt to locate the source of the vibration. These sections were found in normal working condition with no discrepancies noted. The fuel control unit was not adjusted or changed at this time. The aircraft then flew another flight with no discrepancies noted.

The accident board is of the opinion that it is quite possible the vibration experienced by the pilot two flights before the accident could be related to the cause of the accident, although the correlation between the two incidents is unknown.

The unusual attitude maneuvers performed by the pilots immediately prior to the high RPM/high temperature indications are determined by the board to be non-contributing. However, because sudden application of the throttle to 100% engine RPM was made on each unusual attitude recovery, the board feels that this may have aggravated an already weakened component, possibly in the fuel control unit.

The board regards the pilot's decision to "shut down the engine" after the third abnormal series of engine gauge readings as justified and sound.

The fact that the pilots experienced no further noise, indications of high engine temperatures, smoke in cockpit, or fire warning lights is evidence that no fire existed after the pilot secured the engine. This is further substantiated by the fact that (b) (6) observed the aircraft prior to its impact with the ground and no smoke or fire indications were evident. This observation occurred while (b) (6) was descending in his parachute.

If no fire existed in the engine either before the engine was flamed out, or, after and prior to the aircraft's impact with the ground, it can be assumed that the high RPM and high tail pipe temperature indications were caused by a malfunction in the main fuel control.

The malfunction in the main fuel control may have been a combination of one or more of the following:

(1) the governor valve centrifugal weights had one or more weights loosened or broken;

(2) a ruptured aneroid;

(3) a double malfunction of these units.

If the governor valve had one of more weights broken or missing, the engine could have run away and had both the high RPM and tail pipe temperature indications, and the throttle may or may not provide control of the engine.

With a ruptured aneroid the malfunction would be limited to a high tail pipe temperature indication and the RPM would be controlled by the governor valve.

With a double malfunction the indication of high TPT and high RPM would be present. The temporary control by the throttle is unusual in this case, however.

Another possibility is a malfunction of the starting fuel control. This is minimized because the pilot observed no abnormal use of fuel which would certainly have been present in this case. In all probability, the engine would not have flamed out when the pilot placed the throttle in the OFF position if the starting fuel control had malfunctioned.

Since the pilot did not smell any fumes or experience smoke in the cockpit prior to ejection, it is assumed there was no fire in flight. This is further substantiated when the pilot failed to see fuel or smoke around the aircraft after he ejected.

When the pilot decided a restart was to be attempted he observed the RPM at approximately 0%. This rules out a bearing failure because the engine would have frozen and/or given fairly severe vibration. This was not experienced after shut down. The examination of the turbine case by the accident investigation showed it to be relatively intact and presented no evidences of turbine blade or nozzle vane failure.

For the pilot to attempt a restart (after his decision to secure the engine) is not considered good procedure under the circumstances. The rough terrain below the aircraft, at the time, was stated by the pilot to be the reason for the attempted restart. However, the attempt was aborted when it became evident that the altitude was becoming precariously low. The fact that the airstart procedures located on the canopy rail were unreadable was an oversight by responsible maintenance personnel.

The rear seat and canopy were recovered after an extensive search of the ejection area. The front seat could not be found. It is therefore not known why the front seat ejection seat failed to eject the canopy. Two causes are possible: (1) cable linkage not adjusted and, (2) misfire of the initiator.

The remainder of the ejection procedures were considered normal.

(b) (6) two smoke flares failed to function. A search at the scene of the ejection failed to uncover them.

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The accident board conducted a test on twelve flares and found none that failed to function. Four of the flares tested were found to be difficult to ignite because the firing pin bent over the barrel of the flare before the seal was broken. However, the flare was readily ignited by twisting the pin. (b) (6) stated to the board that he did not further attempt to ignite the flare after the pin bent across the barrel. The board believes the flares would have fired normally had (b) (6) twisted the firing pins.

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PART IX: COMMENTS AND RECOMMENDATIONS

The cause of this accident is undetermined due to the severity of impact damage.

Well-rehearsed emergency procedures and sound airmanship were responsible for a no-injury, well-executed, controlled ejection by the pilots.

It is recommended that:

(1) Pilots DO NOT restart once the decision is made to secure the engine due to a malfunction.

(2) All jet aircraft cockpits be placarded with engraved airstart procedure check lists. The seriousness of an emergency situation often becomes so demanding that even the well-qualified and competent pilot is susceptible to confusion and uncertainty and the time delay of removing a check list from flight suit or knee board is not acceptable.

STATEMENT OF PILOT LTJG (b) (6) CONCERNING ACCIDENT INVOLVING TV-2 BUNO 136834 OCCURRING 22 SEPTEMBER 1958

On Monday, 22 September 1958 at 0952 my student and I launched in TV-2 BUNO 136834 (Cherry Coke 185) on a J-3 instrument hop. LT (b) (6) my student, made the I.T.O. and we then climbed out on a heading of 180° M to 1000' and thence on a heading of 225° M to on top. We broke out on top about 2800'. He then turned to 180° M and climbed to 5000'; at 5000', he made the normal voice report to me, that his engine instruments were normal, his oxygen was normal and blinking and to slave his gyro compass. We then turned to a heading of 300° M and climbed to 20,000, as briefed. This placed us just south of Santa Catalina, and east of San Clemente. We proceeded as briefed on the J-3 syllabus. We had completed airspeed changes, turns to gyro headings, timed turns, rate turns, partial panel, yankee pattern, steep turns and two unusual attitudes. Both unusual attitudes were nose high attitudes. After the second unusual attitude my tip tanks went dry. The fuel counter was reading 322 gals. and I had turned on my wing group fuel switch. At this time we were on a heading of 090° M for Miramar. The distance measuring equipment was reading 30 miles to Miramar. The time was approximately 1110. My intentions at this time were to give my student one more unusual attitude with acrobatics to follow. My student was still under the hood, and I was looking around the area when I heard a loud rumble. We were cruising at about 93%, 220 KTS. I looked at the tail pipe temperature and it was pegged at 1000° C plus. I think that I saw the RPM reading 105%. I hollered to the student that I had it and for him to come out from under the hood, at the same time pulling the power back to 86%. The temperature came back to normal and the other instruments were reading normal. LT (b) (6) and I talked it over and I asked him if he had heard the rumble. He said that he had and asked what we were going to do. I told him we were heading for El Centro. I then looked out and saw that Miramar and North Island were overcast. I switched to channel 7 on the UHF transmitter (which is our tactical frequency) and asked for the safety officer or the maintenance officer. My first couple of tries were unsuccessful and I finally talked to LTJG (b) (6) I informed him that I was on my wing group fuel and had had run away TPT and RPM and that I was heading for El Centro. Almost immediately, without our touching any engine controls, we had another severe rumble, pegged TPT and 104% RPM. I then pulled the power to idle, checking my instruments at the same time. The TPT came back to normal and the RPM came down, then almost immediately went back to 104%. The TPT pegged and the rumble came on again. All other instruments were normal and our altimeter was reading 19,200'. I then pulled the throttle around the horn, switched to guard and tried to call El Centro. I also placed the IFF on emergency. I didn't get an answer from El Centro, but Miramar RATCC asked if they could be of any assistance. I told them that I had flamed out my engine and that I would try a restart, also that I was squawking emergency and was located almost over the top of Art Radar Site. He told me that they held me over the top of Anderson, and I said that I concurred. We had been gliding the whole time and I believe our altitude was around 14,000'. I then noted the RPM and saw that I had only about 8% or 9%. I turned off my inverter's to save power for the starter. When I did this, I turned off my IFF and RATCC came up and told me that they had lost my squawk. I told them that that was correct and that I was going to try a restart. I looked for the airstart plate on the left side of the canopy, but the place was unreadable due to the lack of black paint.

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ENCLOSURE (1A)

I then asked my student to read the check off list. He said that there wasn't one in the rear seat. My only reason for trying to get a relight at this time was that I knew we couldn't make El Centro in a glide, and that the terrain beneath us was not desirable for ditching or ejection. I was hoping to get a little more push to clear us of the mountains and on to the desert. I had thought that I would try a restart from memory but with the confusion of no starting check-off sheets and the altitude, I decided that at 10,000' we would eject. I told the student this and we prepared to eject.

He told me to make sure that everything was out of our pockets and that our knee boards were off. I did this and told him to check the safety strap on his oxygen mask and to secure it to his parachute harness. We were still heading east and were approaching the Corrizo impact area. At 10,000' I estimated the time was about 1120. We prepared ourselves for ejection. I then pulled up my left arm rest and then my right arm rest to fire the canopy. This aircraft was fitted with ASC 134. My canopy did not fire. I then reached for the T handle on the right hand side of the seat on the deck. I could not locate the T handle, so I lowered the seat for ejection through the canopy. My student at this time hollered to me if I was ready and I waved back at him. He said that he was going to go and I waved back at him again. He ejected the canopy and I heard the explosion of the canopy and of his seat. The explosion caused a lot of gray smoke to come into the front cockpit and I remember seeing the airspeed indicator reading 145 knots. I believe that our altitude was around 9,800' or possibly lower. After he left, I then ejected. My automatic seat belt worked and my automatic parachute worked and as I came down I could see the airplane flying straight ahead. It then started a left descending turn, leveled out, started toward me, then turned left again and headed towards a mountain. At no time did I notice any smoke or flame coming from the A/C. As I rode down, the swinging of the chute started to get me sick, so I unfastened my oxygen mask because I was afraid that I might vomit in my mask and possibly smother. I tried to locate my student's chute but was unsuccessful until just before I hit and then I saw his chute about ½ to 1 mile behind me. I didn't see the airplane as it hit, but I saw the black smoke right after seeing my student's chute. Almost immediately, I hit the ground and my helmet came off. I got a cactus thorn in my head and a slight scratch on my face. My chute collapsed and I got out of the harness. I called for my student twice and received no answer. I then spread out my chute and the floresecent parka. I was just about to go looking for my student when I saw him running towards me. Within a couple of minutes a rancher and his son pulled up in a truck and asked how we were. We said O.K., and then his son left with my student to pick up his gear. When they got back we saw the helicopter orbiting the wrecked aircraft. I tried to use my smoke flares but they didn't work. LT (b) (6) used one of his and it worked. The helicopter made a pass at us but missed us and turned around to make another run. I then raised my floresent parka and they saw us and then landed. We then left our gear with the rancher and rode back to El Centro in the helicopter. After that we rode to the San Diego Naval Hospital in an ambulance where we were released at approximately 1930.

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Until the high TPT, RPM and rumbling, all instruments were reading normal. The only minor discrepancy was that when my student added 100% power, my tachometer read about 100.5%. There was no calibration correction noted on my tachometer so I pulled the throttle back to 100% and mentally noted the discrepancy in order to place it on the yellow sheet at the termination of the flight.

I know of no way this accident could have been prevented or minimized.

(b) (6)

AUTHENTICATED:

(b) (6)

(b) (6) LT, USN
FLIGHT TRAINING OFFICER

STATEMENT OF STUDENT PILOT, LT (b) (6) CONCERNING ACCIDENT INVOLVING TV-2 BUNO 136834 OCCURRING 22 SEPTEMBER 1958

I was flying in the rear seat of the TV-2, on a scheduled syllabus instrument flight, with LTJG (b) (6) the instrument flight instructor. The first indication of trouble occurred after approximately one hour of flight. I was under the hood when I felt a rumble similar to that encountered when extending dive brakes at high speed. I noticed a fluctuation of the RPM followed by a decrease to 90%. My first impression was that (b) (6) for some reason or other, had taken control of the aircraft, had lowered dive brakes, and changed throttle. (b) (6) then told me he had the aircraft and to come out from under the hood. He told me that the tailpipe temperature gage had pegged at 1000°. This I had not noticed in the few seconds the rumble existed.

At this point, we had a few moments to evaluate the situation. We were at about 20,000 ft altitude, at 86% RPM, the rumble was gone and all gages were reading normally. With both NAS North Island and NAS Miramar under an overcast, NAAS El Centro was chosen as the best field available for landing, considering the possibility of reoccurring engine malfunction. El Centro was tuned in on the Automatic Direction Finder. I had difficulty in hearing (b) (6) radio transmissions, however, I heard him contact NAS North Island tower, explain the difficulty, and request contact with the VF-121 maintenance and safety officers. He also announced his intention to proceed to El Centro and obtained positive radar and IFF identification of our aircraft from the radar control centers in the San Diego Area.

We then discussed the situation on inter-com. It was decided to flame out the engine should the trouble reoccur and that we would bail out rather than attempt a forced landing or flame-out approach to El Centro. We then reviewed all emergency and bail-out procedures.

After approximately five minutes of this normal flight, the trouble reoccurred. The rumble was heard, the aircraft shook, the TPT pegged at 1000°, and the RPM increased to at least 100%. This time it again stopped, but immediately reoccurred and continued, even though (b) (6) had, I believe, decreased throttle to idle. I heard (b) (6) say, "I'm flaming out", and then "It's flamed out". When this was done, all rumble and vibration stopped.

(b) (6) proceeded to place aircraft in a glide and gave the MAYDAY reports and received position reports from the radar centers. He then requested me to read the re-light procedure normally carried on the rear seat side panel. I replied that the card was absent and advised against an attempted re-light, since the situation was serious enough for a voluntary flame-out and because of the inherent explosion possibility in such a situation. However, at this time we were approaching 10,000 feet, with suitable terrain for bail-out. (b) (6) made the radio report of bail-out, and then came on intercom with last minute review of procedures: He would jettison canopy, I would eject first and he would follow, and that he was disconnecting radio gear.

I disconnected radio leads, removed oxygen mask and hose attachment, removed knee-pad, cinched all chute straps and the helmet strap, lowered the helmet visor to cover the eyes but clear the nose, and waited for the canopy to blow. When it didn't I yelled to (b) (6) that I was going. He raised his hands in an affirmative manner. I raised the port handle to lock shoulder straps and then raised the starboard handle to jettison the canopy. The canopy was off and gone in an instant. I then visually acquired the trigger, took hold, assumed an erect position, and ejected. I recall no high wind buffet in the interim between canopy jettison and ejection, however the aircraft was fairly slow (around 140 knots) and in level flight.

The initial ejection acceleration was more violent but similar to that encountered in the ground trainer. However, it was over so quickly that no particular sensations, except for the instantaneous jar, were noticed. The departure from the aircraft was much more violent than anticipated, although I remember being pleased by the easy and successful exit. I was stunned for probably the first second of exit by a high head-forward tumble rate estimated at two to three revolutions per second. I remember being impressed by how far away the aircraft appeared as it flashed by. After about a half dozen revolutions, I became concerned about the high tumble rate and became aware that I was in a tucked position. I decided to straighten out to decrease the tumble rate, and then became aware that I was still in the seat and clutching the seat handles in my hands. I pushed the seat aft and away, and then went after the D ring. With the aid of the left hand, I visually acquired the D ring and pulled it with my right. I recall seeing the chute stream on one revolution, and then experienced a severe shock as the chute blossomed. The shock was much more severe than the ejection, in fact, I looked up anticipating to see some panels of the chute torn. However, the chute appeared to be undamaged. It is hard to estimate the time involved in this sequence; however, I would estimate five to seven seconds.

Once the chute was open there was nothing to do but hang there and wait. At this time, I noticed a very strong exhilarative feeling. I was very happy and pleased with the successful ejection. It appeared as if I might land on a smooth portion of the rugged terrain, and I was finally able to spot (b) (6) chute and the black smoke from the crashed aircraft behind me. About half way down, at mountain top level, I began oscillating fore and aft under the chute by approximately 30°. I tried to reduce the swinging but all efforts were in vain. At low level, the oscillation stopped and I appeared to have no horizontal velocity and therefore no chute straps were opened. The landing was made on a level, sandy portion, and no difficulties were encountered. I grabbed for the bottom risers, however the chute was already collapsing and no action was required.

After removing the chute and finding no injuries, I began to run to the spot where I had seen (b) (6) chute descend, removing Mae West and helmet enroute. I thought (b) (6) had landed in the rocks and would probably be injured and need assistance. The distance between us was roughly one-half mile, and it took me about 3 to 5 minutes to get there. I found him in good shape, spreading out his chute to aid aircraft spotting. At about the same time, a truck appeared with two men. One was (b) (6) from the Crawford Ranch several miles away. They had seen us eject. I left with (b) (6) in the truck to pick up my chute, Mae West and helmet. Shortly after returning to (b) (6) helicopter was seen circling the area where the TV had crashed - a distance of about two miles. I fired a smoke flare (b) (6) had both of his fail to fire), and the helicopter headed for us.

The helicopter passed directly over the four of us and the truck, at about 100 feet altitude, and kept right on going. After reaching the opposite end of the valley, they made a 180° turn and headed back towards us. I was about to light the lake smoke flare when they saw the red survival cloth held by (b) (6) and settled down by us. They had seen the smoke from the flare, but had not seen us on the first pass. They did spot the red cloth on the second pass.

There were several malfunctions apparent in the emergency. First, the canopy jettison handle in the forward cockpit failed to function for (b) (6) Second, the two smoke flares failed to function. Third, my automatic chute opening device possibly failed to function. I'm sure that the ring was attached to the seat belt and that I did not manually release the seat belt, since my hands were clutching the seat ejection handles until I pushed the seat away. We were below the barometric altitude for the automatic release. Whether the automatic opening device failed or whether I pulled the D-ring simultaneously with the automatic release, I don't know. I did not, at the time, think of pulling to see whether the chute would open automatically.

A slight bruise above the right elbow and a cut in the flight suit at that point are believed to have occurred from contact with the cockpit side upon ejection. The elbow was apparently not held close enough to the body.

In conclusion, I would like to commend (b) (6) for the efficient and professional manner in which he handled the emergency. The ejection, although conducted under controlled conditions, was executed with a precise plan and without hesitancy. Effective training in emergency procedures, by VF-121 as well as all Navy organizations, is apparent in the resultant accuracy of both pilots.

(b) (6)

(b) (6)

(b) (6)

(b) (6)

(b) (6)

FLIGHT TRAINING OFFICER

ENCLOSURE (16)

STATEMENT OF PLANE CAPTAIN, [redacted] ADJAN, USN CONCERNING ACCIDENT INVOLVING TV-2 BUNO 136834 OCCURRING ON 23 SEPTEMBER 1958

TV-2 BUNO 136834 was pre-flighted on 23 September 1958 by [redacted] [redacted] ADJAN, USN. Oil level in the engine indicated 11½ quarts. Intakes, tailpipe and plenum chambers were thoroughly checked as well as the daily and preflight inspection sheet. There was no abnormal sound or vibration on starting when I check in the blowin doors.

[redacted]

AUTHENTICATED:

[redacted] LT, USN
FLIGHT TRAINING OFFICER

ENCLOSURE (10)

STATEMENT OF S A R HELICOPTER PILOT, (b) (6) ADC/AF, CONCERNING ACCIDENT INVOLVING TV-2 BUNO 136034 OCCURRING 22 SEPT 1950

I manned the SAR helo after receiving word from the tower that Miramar had called that Cherry Coke 185 had flamed out 40 miles east of Miramar heading for El Centro.

I headed west and spotted what appeared to be smoke on a mountain top due west. I flew straight toward smoke and had Anderson monitor check smoke. They reported smoke 15 miles northeast of them. Continuing on heading I arrived at smoke and it was the burning remains of a plane color markings of orange and white.

I circled crash twice and then spotted orange smoke to the south approximately 4 miles. I informed Anderson and investigated the orange smoke.

It was the two (2) pilots from the crashed TV-2 and both were checked by Flight Surgeon and found to be O.K. I off-loaded spare gear from helo and left all the pilot's gear with some men from the Crawford Ranch close by.

I loaded both downed pilots aboard and returned to base. I passed all info I had to Anderson monitor to be relayed to El Centro and Miramar.

/s/ (b) (6)
ADC/AF

(b) (6)

(b) (6) LT, USN
FLIGHT TRAINING OFFICER

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ENCLOSURE (2B)

1. REPORTING activity: NAS NI SD

2. REPORT SERIAL: 94

3. DATE OF TROUBLE: 9/25/58

4. MAJOR COMMAND (Enter number in space at right): 1 - ANT 3 - NABS 5 - FLAW 7 - NART 8 - MATS 2 - LANT 4 - NATRA 6 - R & D 9 - BAR 0 - OTHER: 3

5. ITEM IDENTIFICATION (Stock number): R-2915-344-0046-NBPO

6. ACCT. CODE: X

7. ITEM NOMENCLATURE: Control Assembly TJ-A3

8. MFGR'S. CODE: BD

9. ITEM PART NUMBER:

10. QUANTITY: 1 ea

11. OVERHAULED BY (Enter number in space at right): 1. ALAM 3 - CORP 5 - LAKE 7 - NORIS 9 - QUON. 2 - CH. PT. 4 - JAX 6 - NORF 8 - PENS 0 - OTHER

12. AIRCRAFT / ENGINE/ACCESSORY: MODEL TV-2 / MODEL TJ-A3

13. TIME (Hours): 172.7

14. AIRCRAFT BUNO: 136834

15. ACCESSORY SER. NO.: 167444

16. OPERATING BASE: North Island

17. CONTRACT NUMBER:

18. TROUBLE RESULTED IN (Check as many as apply): [X] AAR [11] FLIGA [2] FLAME-OUT [X] ENGINE FAILURE

19. HOW TROUBLE NOTICED: [0] INOPERATIVE; [1] INTERFER./BINDING; [2] EXCESS. VIBRATION; [3] UNSTABLE/SURGING; [4] LEAKAGE; [X] RPM OUT-OF-LIMITS; [X] TEMP. OUT-OF-LMT; [7] PRESS. OUT-OF-LMT; [8] TROUBLE SHOOTING; [9] PREVENTIVE MAINT.; [11] OTHER; [12] NOT REMOVED-UNSAT. (Amplify)

20. WHAT IS PART CONDITION: [0] CHAFED; [1] BROKEN; [2] CRACKED; [3] DISTORTED; [4] SCORED; [5] EXCESSIVE WEAR; [6] DISCOLORED; [7] OUT-OF TOLERANCE; [8] CORRODED; [9] O.K.; [11] CANNOT DETERMINE; [X] OTHER (Amplify)

21. CAUSE OF TROUBLE: [0] DESIGN DEFICIENCY; [1] OP. TECH./ADJ.; [2] NORMAL USE; [3] FAULTY MFG/INSPEC.; [4] DEFICIENT MAINT/O.H.; [5] DAMAGED ON RECPT.; [6] WEATHER CONDITION; [7] FLUID CONTAMINATION; [8] FOREIGN OBJ/COMBAT; [9] OTHER PARTS; [11] FAULTY PRESERV.; [X] UNDETERMINED /OTHER (Amplify)

22. CIRCUMSTANCES (Special): [0] FOLLOW-UP REPORT; [11] HIGH TIME REMOVAL; [12] MISSION ABORTED

Environment: [1] SANDY/DUSTY; [2] ARCTIC; [3] TROPIC; [4] ARID

Trouble Discovered During: [X] FLIGHT OPS; [6] GROUND OPS/TEST; [7] MAINTENANCE; [8] PRIOR PART INSTALL

23. DISPOSITION OF FAILED PART (Do not check if not removed): [0] RETURNED TO SUPPLY; [1] REPAIRED/REINSTALLED; [2] SURVEYED (Lost, Missing, or Destroyed); [X] HOLDING 30 DAYS 60 9/29/58 (Show 8.410 or date returned to supply)

[4] RELEASED FOR PRIORITY INVEST (Name of OCE)

PER: (Ref. document specifying invest. OCE)

[5] TO CONTRACTOR: (Name of contractor)

VIA: (Signature contractor's local rep.) (Date)

FINAL DISPOSITION: (Ref. doc. advising ultimate return to supply)

24. STATEMENT OF TROUBLE/CORRECTIVE ACTION (Check box only when publication as FUR Digest Phrase is desired)

25. AMPLIFYING REMARKS (Attach additional sheets, sketches, and photographs, as appropriate)

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27. REPORT IS: [0] FUR; [1] AMPFUR; [2] URGENT AMPFUR; [3] FLIGHT SAFETY AMPFUR; [X] PRIORITY DIR (OCE use only)

AILURE, UNSATISFACTORY
R REMOVAL REPORT

26. SIGNATURE

29. RANK/RATE

30. DATE

C72227

FUR
(Mail to FUR Center)

ENCLOSURE

SHB:ebw
7031

NAS NI SD PRIORITY DIR NO. 94

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1. VF-121 DET "A" Work Request No. 26-58 of 23 September 1958 requested an immediate DIR test on fuel control removed from crashed TV-2 aircraft, BuNo. 136834 and VF-121 DET "A" AMPFUR serial No. 477 of 23 September 1958 indicates engine failure due to engine R.P.M. and tail pipe temperature out of limits.

2. The following is the result of the fuel control investigation:

a. Three parts of the fuel control assembly were received, namely, the cut-off valve assembly, P/N 116886, the governor valve assembly, P/N 185034, and the regulator valve cover, P/N 116998. These parts were installed in their proper places, in the portion of the broken and mutilated section of the fuel control as received. Due to extensive impact damage to these parts no flow testing was attempted.

b. Disassembly inspection of the parts received did not reveal any discrepancy nor indication of malfunctioning.

3. It is concluded that the fuel control parts recieved did not contribute to the engine failure.

Copy to:
NATSF, PHILA
BUAER (MA-4)
BUAER (PP-2)
VF-121 DET "A"
Allison Representative

29

AUTHENTICATED:

(b) (6)

LCDR USN
MAINTENANCE OFFICER

ENCLOSURE (3A)

2

STATEMENT OF POWER PLANTS CHIEF PETTY OFFICER, (b) (6) ADC, CONCERNING ACCIDENT TO TV-2, BUNO 136834 OCCURRING 22 SEP 1958

On 2 July 1958, Power Plants Division received TV-2 BUNO 136834 for a major acceptance check. The material condition of the engine was good. Routine maintenance was performed. Turbine dye check was completed, and all existing directives were complied with. No discrepancies were noted at this time.

(b) (6) ADC, USN
Power Plants CPO

AUTHENTICATED:
(b) (6)

(b) (6) ICDR, USN
MAINTENANCE OFFICER

30

ENCLOSURE (3B)

STATEMENT OF THE SQUADRON AIRCRAFT MAINTENANCE OFFICER, LCDR [redacted],
CONCERNING ACCIDENT INVOLVING TV-2 BUNO 136834 OCCURRING 22 SEPT 1958

TV-2 BUNO 136834 was accepted by the Navy on 6 April 1954. It completed overhaul 7 February 1957 at NAS, North Island after flying 1144.9 hours. The second service tour began 29 March 1957 and was accepted by VF-121 Detachment ALFA from NAAS, Chase Field on 30 June 1958. On 14 July the aircraft completed a major inspection, flew one test flight and a ferry flight to NAF, Litchfield Park, Arizona for modification. The aircraft was in a non-aging modification status from 18 July until 27 August 1958, a period of 42 days, while undergoing various TV Aircraft Service Changes, including 134, and a modification to incorporate a TACAN capability. The weight and balance characteristic of the aircraft did not change appreciably with these changes and the aircraft remained well within the CG limits. This aircraft flew twelve (12) flights after acceptance by this squadron, four (4) of which by the same pilot at the time of the crash. Pilots flying four (4) of the last eight (8) flights had "Downed" the aircraft on return but only one (1) flight (the second from last flight) for an engine rumble or vibration. A subsequent ground inspection of the turbine vane assembly and turbine blades was completed with no discrepancies. A full-power ground runup was conducted with no discrepancies noted. The aircraft flew one more flight without incident or discrepancy.

ASC 134 was installed by the NAF, Litchfield but the complete installation was inspected and tested by this squadron in accordance with the Erection and Maintenance Manual for TV aricraft. An immediate check of five (5) other assigned TV's was made when it was known the canopy failed to jettison from the front seat. All seats were properly rigged, the plumbing systems intact, travel of the cable to the initiator was greater than 3/4 inch and the initiator cartridges appeared undamaged. If the seat can be recovered, a further investigation will be conducted. The salvaged remains of the fuel control were returned to O & R, North Island for DIR. The altitude aneroid control and the flyweight governor were not recovered from the wreckage. From a discussion of the symptoms with the Allison Field Service Representative, the most likely cause of engine malfunction was a broken or loosened flyweight in the governor. This cannot be verified because this section of the control was not recovered.

[redacted] LCDR, USN

AUTHENTICATED:

[redacted]

[redacted] LT, USN
FLIGHT TRAINING OFFICER

31

ENCLOSURE (3C)

DEPARTMENT OF COMMERCE—CIVIL AERONAUTICS ADMINISTRATION

INCIDENT REPORT

TO: Commander
Military Flight Service
1902 AACS Squadron
Hamilton Air Force Base, Calif.

FROM: Chief Controller :
Miramar Radar Air Traffic Control Cent
San Diego 45, Calif.

The following is a description of an incident which affected the operation of this Airways Operations Facility. It is forwarded to acquaint you with the particulars of the incident, and it is requested that it be immediately brought to the attention of the pilot or other individual(s) involved. It is hoped that a review of these facts will result in recommendations which will prevent recurrence of incidents of this type. No reply is required; however, if desired, the undersigned will be glad to answer any questions at your convenience. Any action which you can take to assist the Airways Operations Division to provide more efficient service will be appreciated.

TYPE OF INCIDENT: ☒ PRIMARY ☐ SECONDARY

TIME OF INCIDENT — DATE: Sept. 22, 1958 ☒ DAY ☐ NIGHT

INCIDENT NO.: MMR - RAPCON- 4

AGENCY/AIRCRAFT IDENTIFICATION
Cherry Coke 185 (Navy 136834) TV2

NAME(S) OF PERSONNEL OR PILOT
A. H. Gonzales, VF-121, NAS North Island

SUMMARY OF INCIDENT

2216532 Cherry Coke 185 a TV2 departed NAS North Island on a local VFR flight plan.

2218182 Miramar RATCC intercepted a call from Cherry Coke 185 that he had a flameout and was in the vicinity ANT radar. Upon inquiry from RATCC, Cherry Coke 185 advised he could use assistance and wished to proceed to El Centro.

2218192 Aircraft radar identified at 083° 43 miles from NAS Miramar. Pilot was advised of his position which was over Anderson radar, and given a steer to El Centro.

2218192 Coast Guard, NAS Miramar Operations, and Los Angeles Center notified.

2218212 Cherry Coke 185 advised RATCC: "Unable to make El Centro, going over the side now." Pilot was given position - 074° 47 miles from NAS Miramar. Aircraft disappeared from radar scope at 074° 49 miles.

2218232-1900Z RATCC assisted various rescue aircraft to bailout area.

2218532 Helicopter from El Centro sighted wreckage of aircraft. Aircraft demolished. No apparent damage to property or persons on the ground.

2218552 A flare was sighted.

2219172 Both pilots were picked up by the El Centro helicopter. Pilots sustained only slight injuries.

Weather - Miramar - 1800Z Ceiling measured 1,500 overcast, visibility five miles, haze, temperature 67, dew point 59, wind South four, altimeter setting 2979, visibility north, three miles.

1820Z Ceiling measured 1,500 overcast, visibility five miles, haze, temperature 68, dew point 59, wind south four, altimeter setting 2980.

1900Z Ceiling measured 1,500 overcast, visibility five miles, haze, temperature 68, dew point 59, wind south three, altimeter setting 2979.

El Centro - 1800Z - Clear, visibility twenty miles, temperature 95, dew point 76, wind southeast ten, few cumulus clouds.

1900Z Clear, visibility twenty miles, temperature 98, dew point 67, wind southeast five, few cumulus clouds.

REMARKS
cc: M-520
LA-520
VF-121, Detachment Alfa, North Island

32

ATTACHMENTS

FORWARDED
DATE: 9/22/58
SIGNATURE OF ...
(b) (6)
[redacted]

U.S.G.P.O. [illegible]

ENCLOSURE (2A)

FLEET WEATHER CENTRAL
NAS SAN DIEGO, CALIF.

CRASH OR FIRE REPORT

DATE 22 SEPT 1958

TIME 1000 - U 1800Z

PLACE NAAS EL CENTRO (NJK)

WIND DIRECTION ESE VELOCITY _____ KNOTS 9

GUSTS _____ KNOTS

COURSE _____ BALL

TEMPERATURE 93 DEGREES FAHRENHEIT

DEW POINT 73 DEGREES FAHRENHEIT

HUMIDITY 54 PER CENT

WEATHER NONE

CEILING UNLIMITED

VISIBILITY 20 MILES

STATION PRESSURE 29.626 INCHES

ALTIMETER NONE REPORTED

REMARKS 0.0 of LOW CUMULUS TYPE CLOUDS. PAST 24 HR MIN TEMP 77 DEGREES.

OBSERVER NAME NOT AVAILABLE

RATE _____

AT THE TIME OF THIS REPORT THE SAN DIEGO AREA WAS OVERCAST WITH THICK STRATUS CLOUDS.

/s/ (b) (6) LCDR
(signature, Rank/Rate)

(b) (6)

(b) (6) LT, USN
FLIGHT TRAINING OFFICER

ENCLOSURE (6)

FIGHTER SQUADRON ONE TWENTY ONE
U.S. NAVAL AIR STATION
MIRAMAR 45, CALIFORNIA

VF121/WNR:rh
3040
Ser: 2
5 January 1959

TO: Chief of Naval Operations (Op-57)

TV-2 136834

9/12/58

SPEED LETTER

Subj: VF-121 AAR Ser 6-58

Ref: (a) COMNAVAIRPAC End ser 80/12725 of 13 Nov 1958

1. No separate legal investigation was conducted in connection with VF-121 AAR Ser 6-58.

J. M. THOMAS

Copy to:

COMCARAIRGRU TWELVE
COMNAVAIRPAC
CHIEF, BUAER
COUSNAVSAFCEN (3 copies)
CINCPACFLT
BAR BURBANK
BAR COLUMBUS
NPU EL CENTRO, CALIF
BUORD (Ma-5)
NAVY FLT SAF LIAISON OFFICER, Directorate of FltSaf Research, Norton AFB

ORIGINAL

TV-2
136834
1/22/58

FIGHTER SQUADRON ONE TWENTY ONE
U.S. NAVAL AIR STATION
MIRAMAR 45, CALIFORNIA

VF121/WNR:rh
A25
Ser 1200
24 December 1958

(b) (6) [redacted]

ORIGINAL

From: Commanding Officer
To: Chief of Naval Operations

Subj: VF-121 AAR 6-58; addendum to

Ref: (a) COMCARAIRGRU TWELVE ltr 71/500 of 27 Oct 1958

Encl: (1) CO, VF-121 ltr ser 1111 of 3 Dec 1958.

1. In accordance with reference (a), a further investigation was held and the following information is forwarded as enclosure (1).

J. M. THOMAS

Copy to:
COMCARAIRGRU TWELVE
COMNAVAIRPAC
CHIEF, BUAER
COUSNAVSAFCEN
CINCPACFLT
BARBURBANK
BARCOLUMBUS
NPU EL CENTRO, CALIF.
BUORD (Ma-5)
NAVY FLT SAF LIAISON OFFICER, Directorate of FltSaf Research, Norton AFB

RECEIVED
JAN 2 1959
NAVAL AVIATION SAFETY CENTER

RECEIVED
NAVY DEPARTMENT
BUREAU CENTRAL MAIL DIV.
29 DEC 1958

ORIGINAL

Msg. No. _____
Date _____

Squadron Copy

MEDICAL OFFICERS REPORT OF ATRCRAFT ACCIDENTS/INCIDENTS AND GROUND ACCIDENTS

OPNAV FORM 3750-8 (REV. 2-54)
(SUPERSEDES OPNAV Form-3750-22)

OPNAV REPORT 3750-1

GENERAL INSTRUCTIONS

1. This report shall be filed in the event of an aircraft accident/incident which involves one or more of the following:
   - Death
   - Injury
   - Bail-out or Ejection (attempted or successful)
   - Wherever physiological or psychological factors are involved
   - Aircraft Ground Accidents resulting in serious injury
   - Ditching
   - Water Crash
2. Completion of the form shall be the responsibility of the flight surgeon
3. For type accident and damage code refer to OPNAV INSTRUCTION 3750.6A.
4. This form shall be prepared in quadruplicate. One copy shall be turned over to the Aircraft Accident Board (or the Survival and Intelligence Officer in the case of combat incidents), and the original shall be air mailed (regular mail within 250 miles of Washington, D.C.) direct to Chief of Naval Operations (OP-57) Navy Department, Washington 25, D.C. within 4 working days following the accident. The third copy shall be mailed direct to Safety Equipment Branch, BUAER, Navy Department, Washington 25, D.C. The fourth copy shall be forwarded direct via air mail (regular mail within 250 miles of Norfolk, Va.) to the U.S. Naval Aviation Safety Activity, Naval Air Station, Norfolk 11, Virginia. Where more than one aircraft is involved, separate forms must be completed for each aircraft wherein one or more of the requirements in paragraph 1. above are applicable. (Additional copies may be prepared for use of squadron flight surgeons and other interested individuals)

1. FROM (Ship or station address)	2. SERIAL NO.	3. ACCIDENT OCCURRED (Geographic location)	4. TIME (Local)	5. DATE
VF-121 USNAS, NI, SAN DIEGO, CALIFORNIA	6-58	33 miles 265° from El Centro Naval Air Station	1125	9/22/58

6. PLANE COVERED BY THIS REPORT	MODEL	BU. NO.	NO. OCCUPANTS	UNIT OPERATING AIRCRAFT	TYPE ACCIDENT	DAMAGE
	F9F-2	136834	2	VF-121 Detachment A	G6	A
7. OTHER PLANE (if involved)						

8. NAME OF PILOT IN CONTROL OF AIRCRAFT (last, first, middle) (b) (6) — UNIT PILOT ATTACHED TO: VF-121 Detachment A

SURGEONS CHECK LIST: ☑ ALL PARTS OF FORM COMPLETED ☐ SURVIVORS NARRATIVES ☑ PHOTOS AS NEEDED ☑ RECOMMENDATIONS ☐ COPIES FURNISHED

10. REPORT FILED BY (b) (6) LT MC USN — (b) (6) — DATE: 7 October 1958

11. ☒ AIRCRAFT ACCIDENT ☐ AIRCRAFT INCIDENT ☐ COMBAT INCIDENT ☐ GROUND ACCIDENT

13. ACCIDENT DESCRIPTION

INCLUDE HERE A PARAGRAPH GIVING A BRIEF BUT FACTUAL ACCOUNT DESCRIBING THE ACCIDENT/INCIDENT. INCLUDE SUCH CAUSES AS KNOWN, ESTIMATES OF "G" FORCES, ANGLES OF IMPACT, SPEED ON IMPACT, ATTITUDE ON IMPACT, ETC. ATTACH PHOTOGRAPHS WHEN PERTINENT.

See Enclosure (1)

14. PILOT FACTORS (Check pertinent pilot factors listed below)

	PILOT	CO-PILOT		PILOT	CO-PILOT
IN CONTROL AT TIME OF ACCIDENT/INCIDENT	X		HYPOXIA SUSPECTED	NO	NO
AMOUNT OF FLIGHT TIME IN LAST 24 HOURS	0	0	CARBON MONOXIDE POISONING SUSPECTED	NO	NO
NUMBER OF FLIGHTS IN LAST 24 HOURS	0	0	FAULTY VISION	NO	NO
NUMBER HOURS DUTY IN LAST 24 HOURS	4	4	AEROEMBOLISM	NO	NO
HOURS SINCE LAST FULL MEAL	4	4	BLACKOUT, GREYOUT, REDOUT	NO	NO
TIME AT CONTROLS THIS FLIGHT	1.5	1.5(DP)	VERTIGO	NO	NO
TOTAL FLIGHT TIME	1578	1790	NIGHT BLINDNESS	NO	NO
TOTAL FLIGHT TIME IN MODEL	187	19	FATIGUE	NO	NO
NUMBER PREVIOUS ACCIDENTS	0	0	DOMESTIC DIFFICULTIES	NO	NO
DATE OF LAST ACCIDENT	-	-	UNFAMILIARITY IN TYPE AIRCRAFT	NO	NO
NUMBER DAYS GROUNDED IN LAST MONTH	-	-	ANXIETY REACTION	NO	NO
DATE LAST LOW PRESSURE INDOCTRINATION	Nov 1957	July'58	LAST CER (date and score)	Nov.'58 412	July'58 415
AMOUNT SLEEP IN LAST 24 HOURS	8	7	OTHER PERTINENT FACTORS IN ACCIDENT (describe below)		

15. COMMENTS ON ITEMS CHECKED UNDER ITEM 14 WHICH ARE PERTINENT TO ACCIDENT/INCIDENT. WHERE APPLICABLE, COMMENT BELOW ON ANY OF THE ABOVE FACTORS AFFECTING CREW MEMBERS OR PASSENGERS

None of the above factors appear to be pertinent in this accident.

16. INCLUDE SURVIVORS NARRATIVES

OPNAV FORM 3750-8 (REV. 3-54)

SUMMARIES OF SAFETY EQUIPMENT, INJURIES AND CAUSE

DIRECTIONS

1. Use separate form for each person.
2. Under Injury Class, use following key:

Class "A" Fatal injury ... Class "B" Critical injury ... Class "C" Serious injury ... [illegible]

Class "D" Minor injury ... Class "E" No injury. Class "F" Unknown injury - lost and presumed drowned. Class "G" Unknown injury - missing.

3. Under disposition, use following key: [illegible]

[redacted] [redacted] | RANK/RATE: LTJG | AGE: [redacted] | HEIGHT: [redacted] | WEIGHT: [redacted]

7. DUTY ABOARD PLANE, ON DECK/GROUND: PILOT

8. POSITION OCCUPIED AT TIME OF ACCIDENT: FRONT SEAT

9. INJURY CLASS: E

10. DISPOSITION: A

11. SAFETY EQUIPMENT		MODEL/TYPE	AVAILABLE	USED	NOT USED	DAMAGED	LOST
SHOULDER HARNESS	MS	16069-1	YES	X			
LAP BELT	MS	16036-2	YES	X			
INERTIA REEL	03	903-HN	YES	X			
"G" SUIT			NO				
HELMET	MB	4(USAF)	YES	X		NO	
OXYGEN MASK		A13A	YES	X		NO	
GOGGLES		Visor incorporated in helmet					
SHOES (type)		Standard	YES	X		NO	
FLIGHT SUIT, OTHER THAN "G" (type)		Summer	YES	X		Torn	
[illegible] (type) Life Vest		MK II	YES		X	NO	
OTHER (specify) Gloves		Summer	YES	X		NO	

WAS OXYGEN BEING USED AT TIME OF ACCIDENT: [X] YES [ ] NO

PREOXYGENATION: [ ] YES [X] NO

IF YES, OXYGEN SUPPLY PRESSURE PRIOR TO FLIGHT 400 PSI

AT TIME OF ACCIDENT Unknown PSI

WAS OXYGEN EQUIPMENT PRE-FLIGHTED BY PILOT: [X] YES [ ] NO

IF SHOULDER HARNESS USED	LOCKED	UNLOCKED	TIGHT	SLACK
	X		X	

[ ] PRESSED FORWARD AGAINST HARNESS [ ] PRESSED AGAINST SEAT BACK

ON EJECTION	LOCKED	TIGHT	SLACK
	X	X	

12. COMMENT ON EFFECTIVENESS (Entries of "No," "None," "as designed," etc., will not be accepted. If any equipment failed, describe failure and probable cause). Use additional sheet, if necessary.

IN CASE OF BURNS, FREEZING, OR FROSTBITE, LIST ALL CLOTHING WORN. USE ADDITIONAL SHEET, IF NECESSARY.

13. POST CRASH EXAMINATION

IF DEAD, LIST PRIMARY CAUSE (multiple entries, as stated)

INTERNAL INJURIES

AUTOPSY FINDINGS, IF PERFORMED

IF HOSPITALIZED, GIVE DIAGNOSIS | PLACE

ESTIMATED LENGTH OF HOSPITALIZATION

CARBON MONOXIDE-KINE (HbCO) TEST RESULTS

IF GROUNDED, REASON

[redacted]

14. INJURIES

[ ] BURNS	DEGREE	1ST	2ND	3RD	1ST	2ND	3RD	1ST	2ND	3RD	CARBONIZATION ENTIRE BODY
[ ] FROSTBITE	AREA	HEAD (ventral)	(dorsal)		TRUNK (ventral)	(dorsal)		EXTREMITIES (upper)	(lower)		

UNCONSCIOUSNESS [ ] SHORT DURATION-LITTLE SIGNIFICANCE [ ] OTHER (time)

HEAD INJURIES: CEREBRAL CONCUSSION [ ] MINOR [ ] SERIOUS [ ] CRITICAL [ ] FATAL | MINOR FACIAL INJURIES | MAJOR FACIAL INJURIES

MINOR EYE INJURIES [ ] RIGHT EYE [ ] LEFT EYE | MAJOR EYE INJURIES [ ] RIGHT EYE [ ] LEFT EYE

TYPE / BONES	SKULL: CRANIAL	SKULL: FACIAL	VERTEBRAE: CERV	THOR	LUMBAR	SACRAL	COCCYX	SHOULDER GIRDLE	RIBS	PELVIS	UPPER ARM LEFT	UPPER ARM RIGHT	LOWER ARM LEFT	LOWER ARM RIGHT	HAND LEFT	HAND RIGHT	UPPER LEG LEFT	UPPER LEG RIGHT	LOWER LEG LEFT	LOWER LEG RIGHT	FOOT LEFT	FOOT RIGHT
SIMPLE FRACTURE																						
COMPOUND FRACTURE																						
COMMINUTED FRACTURE																						
DISLOCATION		JAW									SHOULDER		ELBOW		WRIST / HAND		HIP		KNEE		ANKLE / FOOT	

AMPUTATIONS - STATE PARTS

AREA OF INVOLVEMENT		LACERATIONS: MILD	MODERATE	SEVERE	CONTUSION/SPRAIN/STRAIN: MILD	MODERATE	SEVERE	ABRASIONS: MILD	MODERATE	SEVERE
HEAD	VENTRAL									
	DORSAL									
NECK										
THORAX	VENTRAL									
	DORSAL									
ABDOMEN	VENTRAL									
	DORSAL									
EXTREMITIES (upper)										
EXTREMITIES (lower)						X				

[ ] DROWNED

SHOCK	EXPOSURE
[ ] MILD	[ ] MILD
[ ] MODERATE	[ ] MODERATE
[ ] SEVERE	[ ] SEVERE

15. CAUSE OF INJURIES (Give opinion as to cause of each injury indicated above. Give specific parts of aircraft involved. Entries of "No," "None," "Unexplained" or "Undetermined" without an amplification will not be accepted.)

[redacted]

OPNAV FORM-3750-6 (REV. 2-54)

SUMMARIES OF SAFETY EQUIPMENT, INJURIES AND CAUSE

DIRECTIONS

1. Use separate form for each person.
2. Under Injury Class, use following key:

Class "A" Fatal injury, is considered for reporting procedure as one that results in death prior to submission of the Aircraft Accident Report.
Class "B" Critical injury is considered for reporting procedure as injury which threatens to result in death either from injuries sustained in the accident or from complications thereof. Critical injuries resulting in death within 30 days shall be reported by letter to the original addressees.
Class "C" Serious injury is considered for reporting procedure as injury less than critical but definitely requiring five or more days hospitalization involving medical treatment but from which the individual will be expected to recover. Unexpected critical conditions or complications erroneously listed in this category which results in death within 30 days shall be reported by letter to the original addressees.
Class "D" Minor injury is considered for reporting procedure as any injury less than serious.
Class "E" No injury.
Class "U" Unknown injury - lost and presumed drowned.
Class "M" Unknown injury - missing.
3. Under disposition, use following key:
"I" - Uninjured
"G" - Grounded
"W" - treated and returned to duty
"H" - hospitalized
"R" - remains recovered
"U" - remains not recovered

1. NAME	2. SERVICE NO.	3. RANK/RATE	4. AGE	5. WEIGHT	6. HEIGHT
(b) (6)	(b) (6)	LT	(b) (6)	(b)	(b) (6)

7. DUTY ABOARD PLANE / ON DECK / GROUND	8. POSITION OCCUPIED AT TIME OF ACCIDENT	9. INJURY CLASS	10. DISPOSITION
Student-Instrument Training	Rear Seat	D	I

11. SAFETY EQUIPMENT	MODEL/TYPE	AVAILABLE	USED	NOT USED	DAMAGED	LOST
SHOULDER HARNESS	MS 26069-1	YES	X			
LAP BELT	MS 26036-2	YES	X			
INERTIA REEL	C3003-M1	YES	X			
"G" SUIT		NO				
HELMET	AFS-9	YES	X			
OXYGEN MASK	A13A	YES	X			
GOGGLES	Visor incorporated in helmet					
SHOES (type)	Standard	YES	X			
FLIGHT SUIT, OTHER THAN "G" (type)	Summer	YES	X			
EXPOSURE SUIT (type)	Life Vest MK II	YES		X		
OTHER (specify)	Gloves	Summer	YES	X		

WAS OXYGEN BEING USED AT TIME OF ACCIDENT	X YES	NO		
PREOXYGENATION	YES	X NO		
IF YES, OXYGEN SUPPLY PRESSURE PRIOR TO FLIGHT	400 PSI			
AT TIME OF ACCIDENT	Unknown PSI			
WAS OXYGEN EQUIPMENT PRE-FLIGHTED BY PILOT	X YES	NO		
IF SHOULDER HARNESS USED	LOCKED X	UNLOCKED	TIGHT X	SLACK
PRESSED FORWARD AGAINST HARNESS		PRESSED AGAINST SEAT BACK		
ON IMPACT	SAFETY Ejection	LOCKED X	TIGHT X	SLACK

12. COMMENT ON EFFECTIVENESS (Entries of "No," "None," "as designed," etc., will not be accepted. If any equipment failed, describe failure and probable cause). Use additional sheet, if necessary.

IN CASE OF BURNS, FREEZING, OR FROSTBITE, LIST ALL CLOTHING WORN. USE ADDITIONAL SHEET, IF NECESSARY.

13. POST CRASH EXAMINATION

IF DIAG. LIST PRIMARY CAUSE (multiple extreme, as state) | INTERNAL INJURIES

AUTOPSY FINDINGS, IF PERFORMED | IF HOSPITALIZED, GIVE DIAGNOSIS | PLACE

ESTIMATED LENGTH OF HOSPITALIZATION | LIST PRE-EXISTING PHYSICAL DEFECTS PRESENT AT TIME OF POST CRASH EXAMINATION (as condition permits)

CARBON MONOXIDE-HAME CONV. TEST-RESULTS

IF GROUNDED, REASON | ESTIMATED LENGTH OF GROUNDING

14. INJURIES

	DEGREE	1ST	2ND	3RD	1ST	2ND	3RD	1ST	2ND	3RD	CARBONIZATION ENTIRE BODY
☐ BURNS											
☐ FROSTBITE	AREA	HEAD (ventral)	(dorsal)		TRUNK (ventral)	(dorsal)		EXTREMITIES (upper)	(lower)		

UNCONSCIOUSNESS ☐ SHORT DURATION-LITTLE SIGNIFICANCE ☐ OTHER (time)

HEAD INJURIES: CEREBRAL CONCUSSION ☐ MINOR ☐ SERIOUS ☐ CRITICAL ☐ FATAL | MINOR FACIAL INJURIES | MAJOR FACIAL INJURIES

MINOR EYE INJURIES ☐ RIGHT EYE ☐ LEFT EYE | MAJOR EYE INJURIES ☐ RIGHT EYE ☐ LEFT EYE

TYPE BONES	SKULL CRANIAL	SKULL FACIAL	VERTEBRAE (specify no.) CERV.	THOR.	LUMBAR	SACRAL	COCCYX	SHOULDER GIRDLE	RIBS	PELVIS	UPPER ARM L	UPPER ARM R	LOWER ARM L	LOWER ARM R	HAND L	HAND R	UPPER LEG L	UPPER LEG R	LOWER LEG L	LOWER LEG R	FOOT L	FOOT R
SIMPLE FRACTURE																						
COMPOUND FRACTURE																						
COMMINUTED FRACTURE																						
DIS-LO-CA-TION		JAW									SHOULDER		ELBOW		WRIST / HAND		HIP		KNEE		ANKLE / FOOT	

AMPUTATIONS - STATE PARTS

AREA OF INVOLVEMENT		LACERATIONS MILD	LACERATIONS MODERATE	LACERATIONS SEVERE	CONTUSION/SPRAIN/STRAIN MILD	CONTUSION/SPRAIN/STRAIN MODERATE	CONTUSION/SPRAIN/STRAIN SEVERE	ABRASIONS MILD	ABRASIONS MODERATE	ABRASIONS SEVERE
HEAD	VENTRAL									
	DORSAL									
NECK										
THORAX	VENTRAL									
	DORSAL									
ABDOMEN	VENTRAL									
	DORSAL									
EXTREMITIES (upper)						X			X	
EXTREMITIES (lower)										

☐ DROWNED

SHOCK: ☐ MILD ☐ MODERATE ☐ SEVERE

EXPOSURE: ☐ MILD ☐ MODERATE ☐ SEVERE

15. CAUSE OF INJURIES (Give specific cause of each injury indicated above. Give specific parts of aircraft involved. Entries of "No," "None," "Instrument or Engine," or "Undetermined" with no explanation will not be accepted. Use additional sheet, if necessary.)

Moderate abrasion and contusion of lateral aspect of right arm just above elbow sustained

OPNAV FORM-3750-8 (REV. 2-54) PAGE 3

BAILOUT AND EJECTION REPORT

(Use separate form for each person)

NAME		RANK	UNIT / DATE ACCIDENT / MODEL / BU. NO.
[redacted]	[redacted]	1st	TV2 / 136834

1. AT TIME OF EJECTION

			YES	NO
INDICATED AIR SPEED (Knots)	145	FEET IN STIRRUPS	x	
ALTITUDE ABOVE SEA LEVEL	8500-9500	SEAT BELT FASTENED	x	
ALTITUDE ABOVE TERRAIN	5500-6500	SHOULDER HARNESS LOCKED	x	
ATTITUDE OF AIRCRAFT	Straight and level	SHOULDER HARNESS TIGHT	x	
		DISCONNECT USED (Give type)	Automatic personal Leads Disconnect #450481	

2. WERE "G" FORCES PRESENT [ ] YES [x] NO — IF YES, STATE NATURE OF FORCE AND DIRECTION OF FORCE

3. LIST DIFFICULTIES EXPERIENCED IN EJECTION (jettisoning canopy, positioning, ejecting, etc.)

NONE

4. AFTER EJECTION

HOW LONG WAS FACE CURTAIN HELD AFTER EJECTION

No face Curtain. TV2 with firing mechanism incorporated in arm rests.

DID SEAT TUMBLE AFTER LEAVING A/C	[x] YES	[ ] NO	(If yes, describe) Began immediately
AUTOMATIC LAP BELT RELEASE USED	[x] YES	[ ] NO	TYPE Mine Safety 160362A
AUTOMATIC RIP CORD DEVICE USED	[x] YES	[ ] NO	TYPE Irvin Mark V barometric release

TIME IN SEAT AFTER EJECTION (Seconds)

Estimate 4 seconds

WERE ANY DIFFICULTIES ENCOUNTERED IN LEAVING SEAT [ ] YES [x] NO — (If yes, describe) Aware that he was tumbling and still in seat when he realized he was gripping arm rests tightly. Pushed away and left seat without difficulty

5. BAILOUT ONLY

INDICATED AIRSPEED (Knots)		
ALTITUDE ABOVE SEA LEVEL		
ALTITUDE ABOVE TERRAIN		
ATTITUDE OF AIRCRAFT		
BAILOUT OVER RIGHTSIDE	[ ] YES	[ ] NO
BAILOUT OVER LEFTSIDE	[ ] YES	[ ] NO
BAILOUT INVERTED	[ ] YES	[ ] NO

6. BAILOUT AND EJECTIONS

WAS FREE FALL DELIBERATE	[ ] YES [x] NO
WAS BAILOUT OXYGEN AVAILABLE	[x] YES [ ] NO — USED [ ] YES [x] NO — TYPE
ALTITUDE RIP CORD PULLED	Automatic
ALTITUDE CHUTE OPENED	Estimate 7000 ft. Indicated
BODY POSITION WHEN CHUTE OPENED	Tumbling
TYPE PARACHUTE	C.F.S Type NB3 Regular harness — SIZE CANOPY 28 FEET
CHUTE HARNESS CINCHED TIGHT	[x] YES [ ] NO

7. LIST ANY DIFFICULTIES IN PULLING RIP CORD OR CHUTE OPENING

NONE

CHUTE DAMAGE

NONE

8. DESCRIBE NATURE OF TERRAIN LANDED ON (rocky, trees, water, etc.)

General terrain is mountainous desert. Actual landing on sandy hardpan.

9. POSITION OF BODY ON LANDING

Feet First

10. DIFFICULTIES IN REMOVING HARNESS AND SPILLING CHUTE

Parachute collapsed spontaneously (wind calm on surface)

11.

Helicopter from El Centro picked them up about 30 minutes after ejection.

12.

Ejection Seat Indoctrination Sept 1952 and July 1958

Survival Officer in previous Squadron responsible for lectures and training of Squadron.

13. SAFETY EQUIPMENT	TYPE	USED	DAMAGED	LOST	DESCRIPTION OF DAMAGE OR WHEN LOST
HELMET	APH-5	Yes			
GOGGLES	Incorporated in helmet				
OXYGEN MASK	A13A	Yes		x	Removed prior to ejection and left in plane
CLOTHING	Summer	Yes			
GLOVES	Summer	Yes			
SHOES	Standard	Yes			

14. OTHER SURVIVAL EQUIPMENT (List all worn, effectiveness and damage)

Life Vest Mark II. Not used

15. INCLUDE SURVIVORS NARRATIVE OF ENTIRE PROCEDURE (Include comments on wind blast, force of ejection, sensation, etc.)

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BAILOUT AND EJECTION REPORT
(Use separate form for each person)

NAME: (b) (6) [redacted] FILE NO. (b) (6) [redacted] RANK: LTJG

UNIT
DATE ACCIDENT: 22 Sept 1958
MODEL: TV2
BU. NO.: 136834

1. AT TIME OF EJECTION

			YES	NO
INDICATED AIR SPEED (Knots)	145 Knots	FEET IN STIRRUPS	X	
ALTITUDE ABOVE SEA LEVEL	8500-9500	SEAT BELT FASTENED	X	
ALTITUDE ABOVE TERRAIN	5500-6500	SHOULDER HARNESS LOCKED	X	
ATTITUDE OF AIRCRAFT	Straight and level	SHOULDER HARNESS TIGHT	X	
		DISCONNECT USED (Give type)	X	

2. WERE "G" FORCES PRESENT: YES [ ] NO [X] — IF YES, STATE NATURE OF FORCE AND DIRECTION OF FORCE: Automatic Personal Leads Disconnect #450488L

3. LIST DIFFICULTIES EXPERIENCED IN EJECTION (Jettisoning canopy, positioning, ejecting, etc.)

When right arm rest was raised-canopy did not jettison. While reaching and fumbling for safety initiator at base of seat, student in rear seat jettisoned canopy normally when he raised his right arm rest.

HOW LONG WAS FACE CURTAIN HELD AFTER EJECTION

4. AFTER EJECTION

No Face Curtain. TV2 with firing mechanism incorporated in arm rests.

DID SEAT TUMBLE AFTER LEAVING A/C	X YES [ ] NO	(If yes, describe)	Began immediately. Rolled forward.
AUTOMATIC LAP BELT RELEASE USED	X YES [ ] NO	TYPE	Mine Safety 160362A
AUTOMATIC RIP CORD DEVICE USED	X YES [ ] NO	TYPE	Irvin Mark V-Barometric release

TIME IN SEAT AFTER EJECTION (Seconds)

Estimate 2-3 seconds

WERE ANY DIFFICULTIES ENCOUNTERED IN LEAVING SEAT: [ ] YES [X] NO — (If yes, describe) Aware that he was still in seat and consciously stepped out.

5. BAILOUT ONLY

INDICATED AIRSPEED (Knots)	
ALTITUDE ABOVE SEA LEVEL	
ALTITUDE ABOVE TERRAIN	
ATTITUDE OF AIRCRAFT	
BAILOUT OVER RIGHTSIDE	[ ] YES [ ] NO
BAILOUT OVER LEFTSIDE	[ ] YES [ ] NO
BAILOUT INVERTED	[ ] YES [ ] NO

7. LIST ANY DIFFICULTIES IN PULLING RIP CORD OR CHUTE OPENING: NONE

6. BAILOUT AND EJECTIONS

WAS FREE FALL DELIBERATE	[ ] YES [X] NO
WAS BAILOUT OXYGEN AVAILABLE	X YES [ ] NO — USED [ ] YES [X] NO — TYPE
ALTITUDE RIP CORD PULLED	Automatic
ALTITUDE CHUTE OPENED	Estimate 7000 ft. indicated
BODY POSITION WHEN CHUTE OPENED	Tumbling
TYPE PARACHUTE	G.F.S. Type NS3 Regular harness — SIZE CANOPY ____ FEET
CHUTE HARNESS CINCHED TIGHT	X YES [ ] NO
CHUTE DAMAGE	NONE

8. DESCRIBE NATURE OF TERRAIN LANDED ON (rocky, trees, water, etc.)

General terrain is mountainous desert. Actual landing in cactus, rocks and sand.

9. POSITION OF BODY ON LANDING

Feet first

10. DIFFICULTIES IN REMOVING HARNESS AND SPILLING CHUTE (windforce, knots, direction)

Parachute collapsed spontaneously (wind calm on surface). Pilot believes he might otherwise have been drug because of difficulty releasing standard parachute harness releases.

11. METHOD OF RESCUE (Last difficulties)

Helicopter from El Centro picked them up about 30 minutes after ejection.

12. LIST TRAINING INDIVIDUAL HAD FOR BAILOUT OR EJECTION

Ejection Seat Indoctrination, Movie and Lecture -Nov 1954
Indoctrination and Trainer - April 1958

13. SAFETY EQUIPMENT	TYPE	USED	DAMAGED	LOST	DESCRIPTION OF DAMAGE OR WHEN LOST
HELMET	HB4(USAF)	Yes		X	On impact with ground
GOGGLES	-----				
OXYGEN MASK	A13A				
CLOTHING	Summer	Yes	Torn		Generously ventilated in the perineal area
GLOVES	Summer	Yes			
SHOES	Standard	Yes			

14. OTHER SURVIVAL EQUIPMENT (List all worn, effectiveness and damage)

Life Vest Mark II. Not used

15. INCLUDE SURVIVORS NARRATIVE OF ENTIRE PROCEDURE (Include comments on windblast, force of ejection, rotation, etc.)

ENCLOSURE (1)

NARRATIVE ACCOUNT OF ACCIDENT

LEJG (b) (6) was on a scheduled VF-121 Det. "A" instrument training flight with his student LT (b) (6) LEJG (b) (6) occupied the front seat as the instructor. The flight was authorized to be conducted in the local operating area for a duration of 2 hours. The aircraft, TF-2, Buno 136834, departed NAS, North Island at approximately 0952Z on 22 September 1958. The pilot, (b) (6) took off with a clearance from North Island which permitted him to climb through the overcast to an "on top" condition which was done.

For approximately one hour, the instructor had the student fly basic air work patterns and maneuvers at or near 20,000 ft. During this period neither pilot nor student noted any abnormalities concerning the operation of the aircraft with one exception. Twice when the throttle was advanced to full power the RPM went to 100.5%. Each time the pilot reduced the throttle so the RPM indicated 100%.

At approximately 1110Z after being airborne for 1 hour and 15 minutes, the pilots heard a loud rumble aft of their position in the cockpit. At this point the pilots observed the tail pipe temperature to be approximately 1000°C. and the RPM 105%. The first reaction of the pilot was to retard the throttle, and the engine RPM dropped to 86% while the tail pipe temperature returned to normal range. This incident occurred immediately after the student had been placed in an unusual attitude situation by the instructor and the recovery had been effected by the student. The pilot was on an easterly heading at this time and his TACAN indicated his position to be 30 miles West of NAS, Miramar. He continued the easterly heading, held his altitude, and contacted the squadron duty officer informing him of the difficulty and that he was proceeding to NAAS, El Centro. The San Diego area was covered by an overcast at the time.

At approximately 1118Z and at a position approximately 40 miles East of NAS, Miramar, a loud rumble was again heard from the engine section accompanied by 103% RPM and 1000° C. tail pipe temperature. The pilot reduced the throttle to idle which caused the abnormal engine indications to cease momentarily. However, this lasted only a few seconds before the engine raced again to 103% and 1000° C. The pilot flamed out the engine. The pilot transmitted a Mayday and then placed the XPT on emergency. RATCC was informed by the pilot of the flameout and that they were leaving the plane. The pilots had discussed the possibility of ejection between the first malfunction at 1110 and the second series of malfunctions at 1118 and had decided to eject if the problem reoccurred. During this time a brief review of ejection procedures was carried out over the ICS. When the pilot flamed out the engine the aircraft was at an altitude of approximately 14,000 feet heading toward El Centre. While gliding the pilot began the air start procedures because the mountains below did not appear to be a desirable area to parachute into. However, he gave up the idea of an air start when he had trouble reading the metal placard showing air start procedures. (b) (6) told the student he would jettison the canopy and the student would eject first. At an altitude of approximately 10,000 feet the pilot pulled up the left arm rest followed by the right arm; however, the canopy did not jettison as designed. While (b) (6) was fumbling for the

for the safety initiator on the deck, the student yelled "he was going and [redacted] followed him with a normal ejection.

Both pilots commented that the exit from the aircraft was easier than they expected with respect to jolt and windblast. They both commented on the immediate onset of tumbling. The aircraft was equipped with automatic lap belts and parachute releases, all of which functioned normally. Neither pilot had any difficulty leaving seat; however, both had to make a positive effort to separate from the seat.

[redacted] stated that he had his hand on the ripcord ring when the parachute began streaming, whereas [redacted] actually pulled his ripcord ring before he was aware of parachute streaming. Later examination of his automatic parachute release indicated that it had functioned normally - apparently just before he pulled the manual release.

Impact with the ground was relatively easy for both pilots, and their parachutes collapsed spontaneously. [redacted] lost his helmet on landing (type HBL-USAF). Nausea secondary to violent swaying motion while descending in the parachute had prompted him to release one side of the Hardman oxygen mask retention.

Both parachute harnesses were equipped with standard releases in contrast to the quick release type. [redacted] stated he had considerable trouble releasing his harness and felt he would easily have been dragged and injured if the chute had not collapsed.

NAAS, El Centro dispatched a helicopter to the scene which picked the pilots up approximately 30 minutes after the accident. While trying to signal the helicopter, two of [redacted] smoke flares failed to function; however, one of [redacted] functioned. They were returned to El Centro where a routine examination by the flight surgeon did not reveal any serious injury.

The aircraft crashed and burned near the top of a 2900' mountain. Two members of the A/C Accident Board proceeded to NAAS, El Centro within two hours after the accident to interview the two pilots and visit the crash scene. An extensive ground search located the canopy and rear seat which were extensively damaged. The front seat which had failed to initiate canopy jettison could not be found. Examination verified that the automatic lap belt on the rear seat had fired and that the automatic parachute actuating cable was attached to the lap belt.

ENCLOSURE (1)

to: Orig. AAC

ENCLOSURE (2)

1. The Flight Surgeon did not visit the scene of the mishap nor participate fully in the field investigation.

2. Likewise the initial deliberations of the A/C Accident Board were not attended.

NOTE: This situation developed because a Flight Surgeon was not assigned to this A/C Accident Board until 3 days after the accident. VF-121 Det. "A" notified the Dispensary at North Island shortly after the accident. The Dispensary assumed that either the Flight Surgeon from the parent squadron or the Flight Surgeon located at El Centro would handle the investigation.

ENCLOSURE (2)

Comments and Analysis

1. The front seat could not be found. It is therefore not known why the seat rest failed to eject the canopy. Survey of the mechanism for firing the initiator indicates that the most likely possibility is failure in the cable linkage to the initiator on the deck.

2. A search at the scene of the ejection failed to find (b) (6) two smoke flares which failed to function.

The accident board conducted a test on twelve flares and found none that failed to function. Four of the flares tested were found to be difficult to ignite because the firing pin was bent over the barrel of the flare before the seal was broken. However, in each case, the flare was readily ignited by twisting the pin. (b) (6) stated that he had not made any further attempt to ignite the flare after bending the pin down against the barrel.

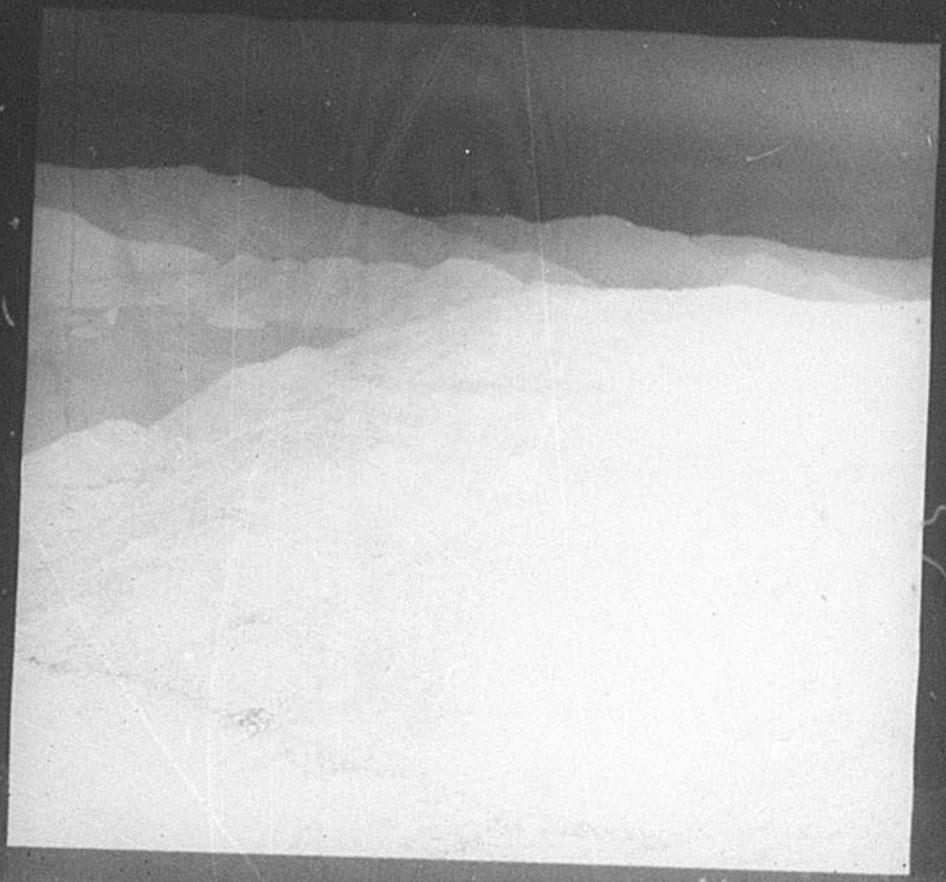
3. (b) (6) removed his mask and left it in the aircraft. His AFSC [illegible] on mask retention, his reasoning was that since the ejection was to take place below 10,000 feet, it would not be needed, and he wanted to remove all extraneous equipment before ejecting. Since he retained his helmet there it all, it is difficult to criticize his decision. However, it would seem that helmet retention would be considerably improved if oxygen mask were left on, and in addition, the face would be protected from windblast.

4. (b) (6) had considerable difficulty removing his parachute harness while he collapsed with standard type releases. As there was no suspension line, the chute collapsed spontaneously. However, he could have been dragged and seriously injured in this rough terrain of rocks and cactus. Likewise a streamer could have occurred if he had landed in H2O.

Enclosure #3

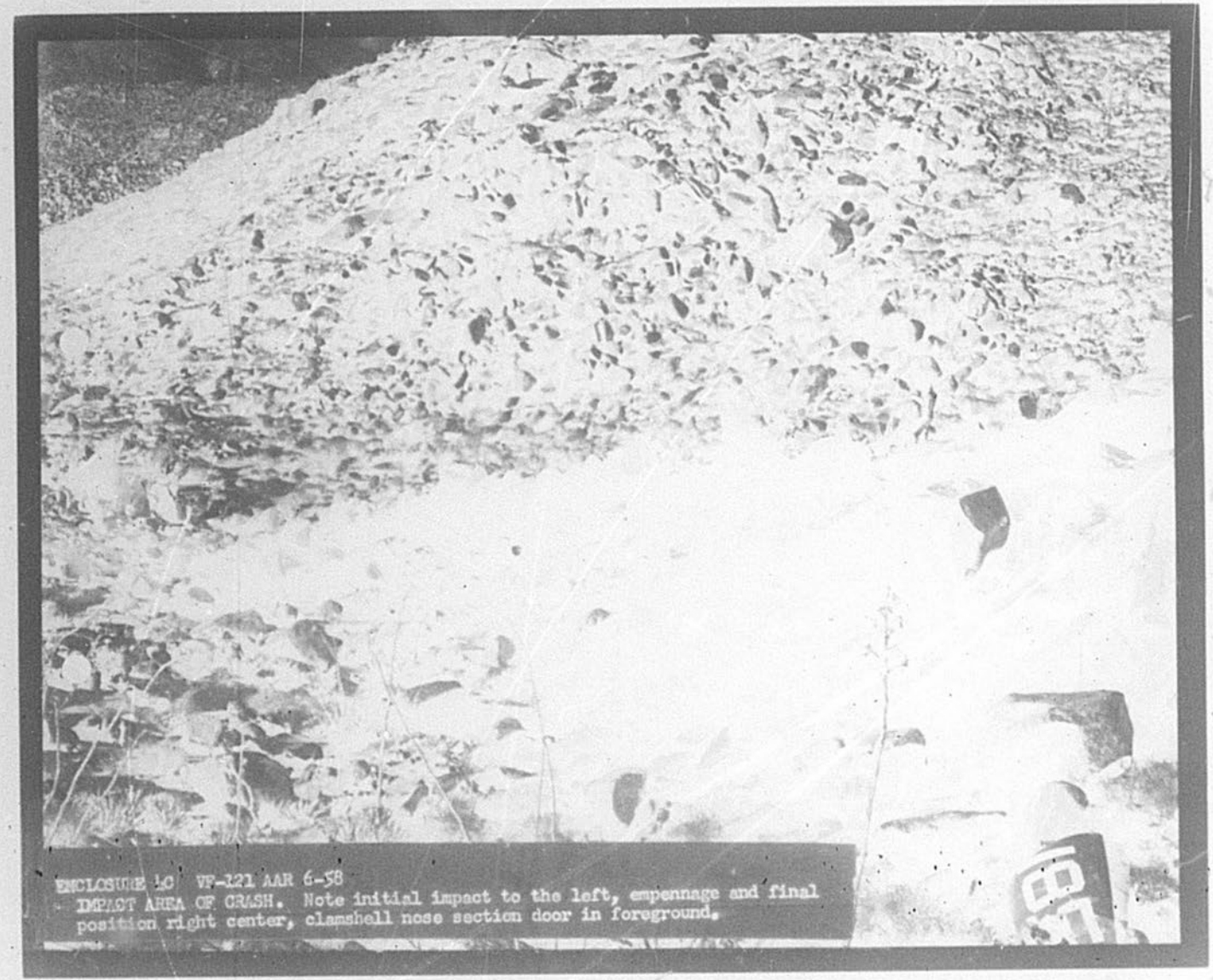
Recommendation:

1. The quick release type parachute harness is recognized as an asset to the safety of the aviator forced to bailout or eject. This accident emphasizes the need to replace the standard T-4 parachute harness used in the late or this squadron as soon as practical.

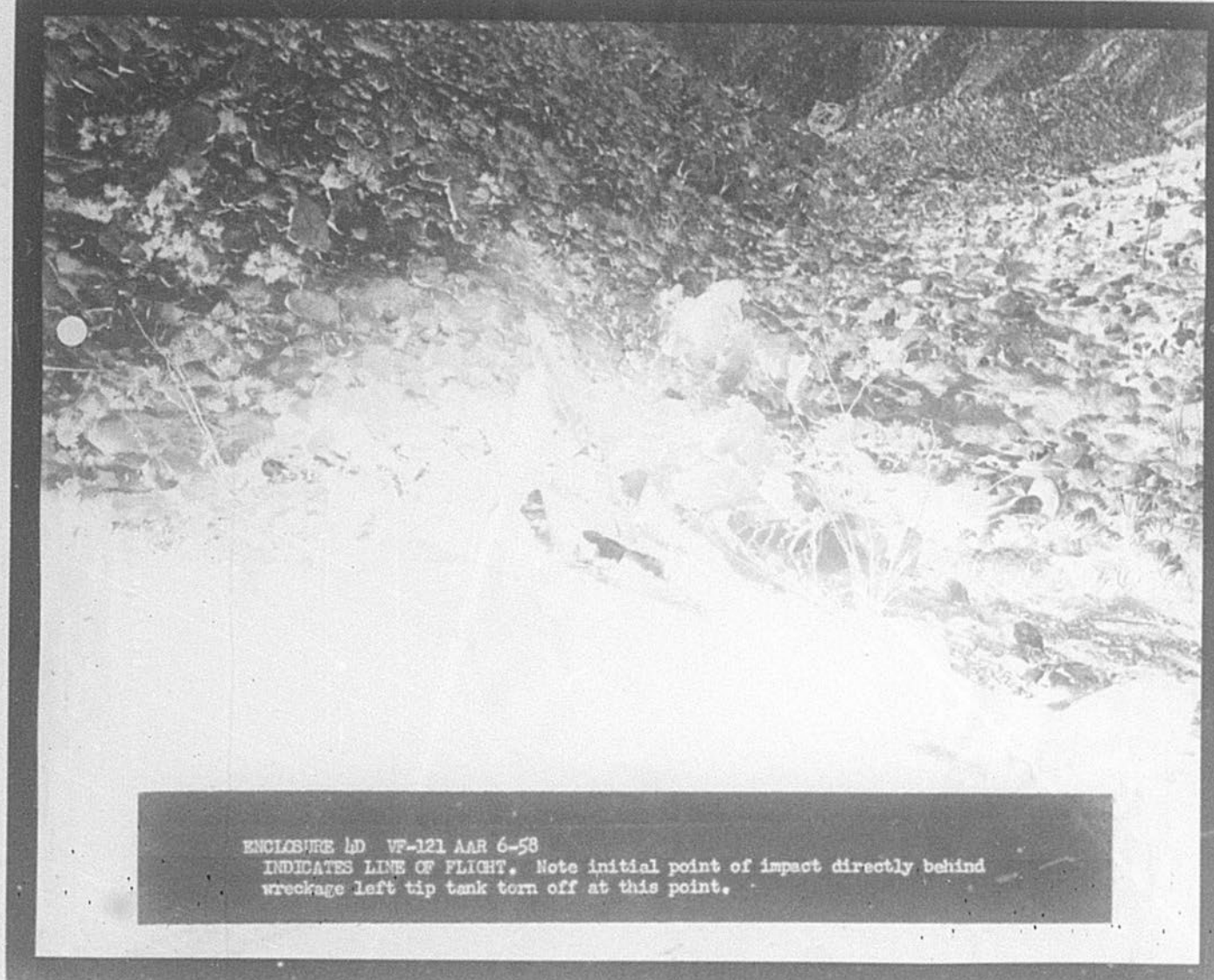


ENCLOSURE 4A VF-121 AAR 6-58
POINT OF IMPACT. Heading of Aircraft upon impact, approximately 240°.

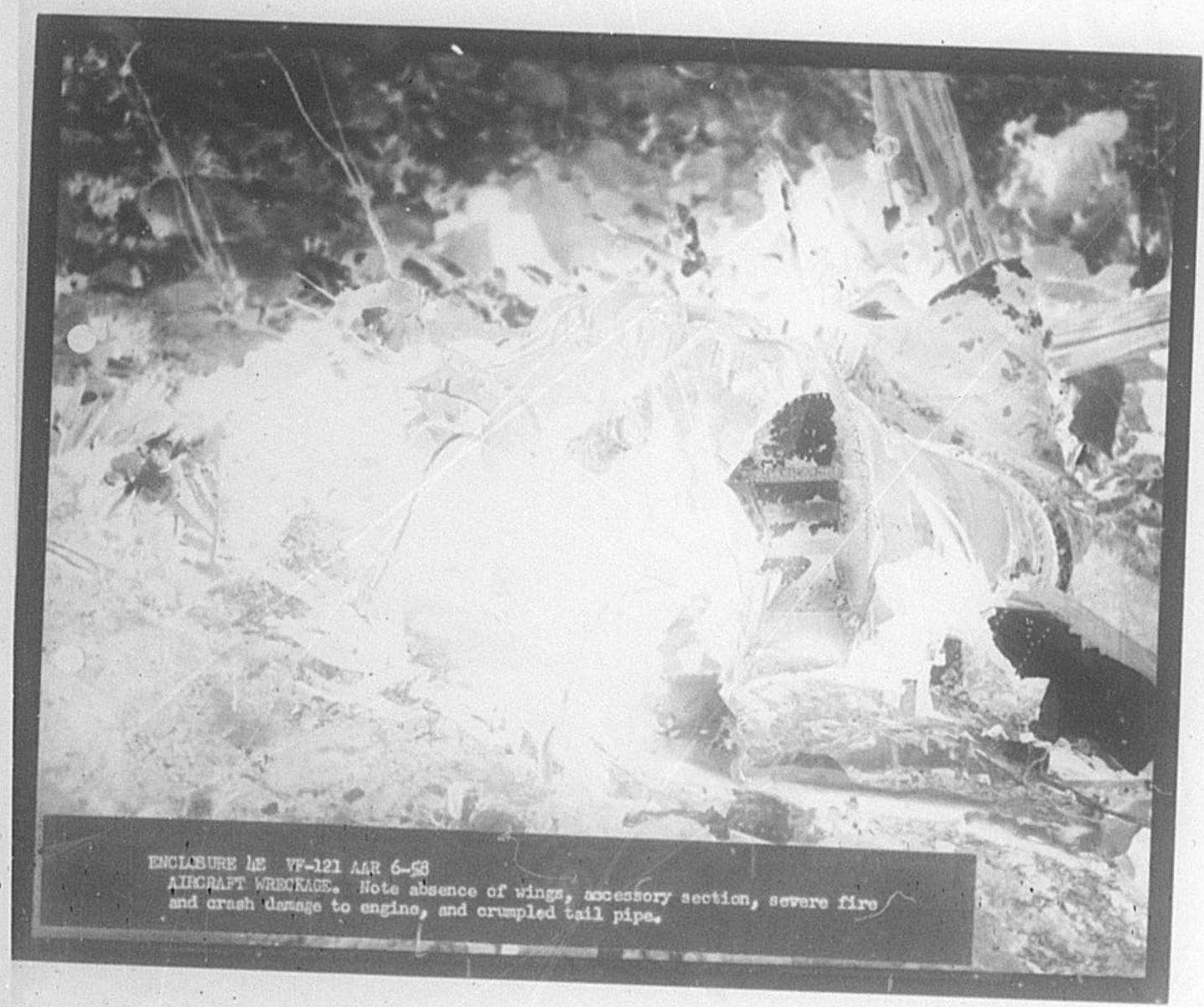
ENCLOSURE 4B VF-121 AAR 6-58
CLOSE UP AERIAL PHOTO OF CRASH SCENE. Initial impact to the left of burned area. Fire result of impact.



ENCLOSURE 1C VF-121 AAR 6-58
IMPACT AREA OF CRASH. Note initial impact to the left, empennage and final position right center, clamshell nose section door in foreground.



ENCLOSURE (D) VF-121 AAR 6-58
INDICATES LINE OF FLIGHT. Note initial point of impact directly behind wreckage left tip tank torn off at this point.



ENCLOSURE 1E VF-121 AAR 6-58
AIRCRAFT WRECKAGE. Note absence of wings, accessory section, severe fire and crash damage to engine, and crumpled tail pipe.